verizon

jetpack™

User Guide

MiFi® 4620L

4G LTE

©2012 Novatel Wireless, Inc. All rights reserved. The information contained in this document is subject to change without notice and should not be construed as a commitment by Novatel Wireless, Inc.

Patents and Licenses

Visit www.novatelwireless.com/patents for a complete list of all Novatel Wireless patents.

Software License

Proprietary Rights Provisions:
The software drivers provided with this product are copyrighted by Novatel Wireless and/or Novatel Wireless' suppliers. Although copyrighted, the software drivers are unpublished and embody valuable trade secrets proprietary to Novatel Wireless and/or Novatel Wireless' suppliers. The disassembly, decompilation, and/or Reverse Engineering of the software drivers for any purpose is strictly prohibited by international law. The copying of the software drivers, except for a reasonable number of back-up copies is strictly prohibited by international law. It is forbidden by international law to provide access to the software drivers to any person for any purpose other than processing the internal data for the intended use of the software drivers.

U.S. Government Restricted Rights Clause:
The software drivers are classified as "Commercial Computing device Software" and the U.S. Government is acquiring only "Restricted Rights" in the software drivers and their Documentation.

U.S. Government Export Administration Act Compliance Clause:
It is forbidden by US law to export, license or otherwise transfer the software drivers or Derivative Works to any country where such transfer is prohibited by the United States Export Administration Act, or any successor legislation, or in violation of the laws of any other country.

Trademarks and Service Marks

Novatel Wireless is a trademark of Novatel Wireless, Inc., and the other trademarks, logos, and service marks (collectively the "Trademarks") used in this user manual are the property of Novatel Wireless or their respective owners. Nothing contained in this user manual should be construed as granting by implication, estoppel, or otherwise, a license or right of use of Novatel Wireless or any other Trademark displayed in this user manual without the written permission of Novatel Wireless or its respective owners.

- Novatel Wireless, and the Novatel Wireless logo are all trademarks of Novatel Wireless, Inc.
- MiFi® and the MiFi logo are registered trademarks of Novatel Wireless, Inc.
- Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Apple®, Mac®, and Mac OS® are trademarks of Apple, Inc., registered in the U.S. and other countries.
- Linux® is the registered trademark of Linus Torvalds in the U.S. and other countries.

The names of actual companies and products mentioned in this user manual may be the trademarks of their respective owners.

Novatel Wireless Revision History

Part Number	Revision	Description	Date
90026530	R1	Initial release	09 Feb 2012

FCC ID: PKRNVWMIFI4620

PN: 90026530_R1_DRAFTL_UG MiFi4620L_VZW_09Feb2012
Please visit www.novatelwireless.com for the latest information about your device.

Contents

Getting Started 1

Overview 2
- Features 2
- Package Contents 2
- System Requirements 3

Components 4
- Service Status Indicator (LED) States 6
- Service Display States 7

Power Management 8

Caring for Your Device 9

Using the MiFi 4620L 10

Accessing the Network 11

Using the Device for the First Time 12
- Assemble the Wall Charger 13
- Install the 4G LTE SIM Card 13
- Remove the 4G LTE SIM Card 14
- Insert and Charge the Battery 15
- Remove the Battery 16
- Battery Tips 17
- Power the MiFi 4620L On and Off 18
  - Power On 18
  - Power Off 18
- Activate Your Device 18

Connecting to the Device 19

Using the Device After Setup is Complete 20
  - Normal Use 20
  - Setting up a Temporary Hotspot 20
  - Security for the MiFi 4620L 20

MiFi Settings 21

Configuring MiFi Settings 22

Login 23
- Login 23
- Menu Bar 23

Quick Start 24
- Admin Password 24
  - Change Admin Password 25
- Wi-Fi Settings 27

Wi-Fi 28
Wi-Fi Profile 28
Choosing a Profile 30
Connected Devices 32
Network 33
LAN 34
IPv4 34
IPv6 35
WWAN 36
Internet Connection 37
WWAN Settings 40
SIM 41
SIM Operations 41
Manual Network Selection 42
Security 43
Password 44
Set Administration Password 44
MAC Filtering 45
MAC Filter 46
Trusted Device List 47
Connected Devices 48
Port Filtering 49
Port Filtering 50
Allowed Applications 50
Custom Applications 51
System 53
System Status 54
System Information 55
System Log 55
Config File 56
Config File Download 56
Software Update 57
Advanced 58
Audio Alerts 59
Audio Alerts 59
Audio Alert Notifications 60
Settings 61
Wi-Fi 62
Router 62
GPS Over Wi-Fi 63
System 65

Diagnostics 66
Modem 67
4G Network (LTE) 68
3G Network (EVDO/1xRTT) 68
3G Network (GSM/WCDMA) 69
Port Forwarding 70
Port Forwarding 71
Custom Applications 72
DMZ 73

Troubleshooting 74
Overview 75
Common Problems and Solutions 76
Technical Support 78
Technical Support 78

Product Specifications and Regulatory Information 79
Product Specifications 80
General 80
Technology/Bands 80
Environmental 80
Regulatory Statements 81
Wireless Communications 83
Limited Warranty and Liability 83
Safety Hazards 84
Proper Battery Use and Disposal 86

Glossary 87

1

Getting Started

Overview
Components
Power Management
Caring for Your Device

Overview

Congratulations on your purchase of the Verizon Jetpack™ Mobile Hotspot - MiFi® 4620L for 4G LTE™ and Wi-Fi!

With the MiFi 4620L you can access 4G LTE networks for faster apps, uploads and downloads. Connect up to ten Wi-Fi enabled devices to the Internet at once - laptops, tablets, e-readers, gaming consoles and more* - and experience download speeds of up to 100 Mbps**.

The MiFi 4620L is backwards compatible to 3G networks, ensuring reliable connectivity when you need it most.

Features

- **Connect to High-Speed Wireless Data (4G LTE, 3G CDMA and GSM)**
- **Wi-Fi Connectivity**
- **Manage Wireless Network Activity**
  - **MiFi Settings** is an easy-to-use web-based interface that allows you to manage, monitor, and customize your Wi-Fi and 4G LTE connection.
- **Advanced Embedded Antenna Design**
- **VPN Capability**
- **Auto Connectivity Options**

Package Contents

The Verizon Wireless MiFi 4620L package includes:

- MiFi 4620L
- 1500mAh Standard Lithium Ion Battery
- Wall Charger
- Protective Pouch
- Verizon Wireless Brochures

* When multiple users are connected to the MiFi 4510L, all of their data usage will be aggregated and applied to the mobile broadband customer.

** Manufacturer's rated peak theoretical speed. Actual speeds may vary.

System Requirements

- Compatible with all major operating systems
- Works with the latest versions of browsers, including Android™, Chrome™, Firefox®, Internet Explorer®, Safari™ and Mobile Safari™

To use Wi-Fi mode, your computer needs Wi-Fi capability and Internet browser software only.

Your device must have proper data service to function properly. (See Using the Device for the First Time on page 12.)

Components

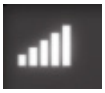
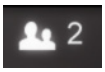
1. **Scroll Button** — Scrolls left or right through available menu options.
2. **Service Status Indicator (LED) —** Shows the device status, including connection and error states. (See Service Status Indicator (LED) States on page 6.)
3. **Micro USB Connector —** The wall charger connects here.
4. **Selection Button —** Use to select a menu option.
5. **Status Display —** Provides connection and battery status, network signal strength, roaming status, and the number of users connected with Wi-Fi. (See Service Display States on page 7.)
6. **Power Button —** Powers the device on and off.

1. **SIM Card Slot —** The SIM card is installed here.
2. **Battery Compartment** — The battery contacts connect here.
3. **Master Reset Button** — Insert a paperclip in the small hole to reset the device to factory settings. (See How do I reset the MiFi 4620L back to factory settings? on page 76.)
4. **Battery Removal Divot** — When the battery is installed, insert a fingernail here and lift to easily remove it.
5. **Network Name and Password Label** — The pre-configured network name (SSID) and Wi-Fi/Admin password are printed on a label inside the back cover of your device.

Service Status Indicator (LED) States

LED Color		Status	Description
No Light		Off	The device is powered off or otherwise is not receiving power.
Yellow		Solid	The device is in power down mode.
		Blinking	The device is powered off and also charging the battery.
Green		Slow Blinking	The device is powered on; 4G service is available but not connected or connected while dormant.
		Blinking	The device is powered on and connected to the 4G network and transmitting data.
Violet		Slow Blinking	The device is powered on; 3G 1X or EV-DO service is available but not connected or connected while dormant.
		Blinking	The device is powered on and connected to a 3G 1X or EV-DO network and transmitting data.
Red		Blinking	If this occurs during power up, no SIM card is inserted. All other times, this indicates an error or a SIM card failure.
White		Blinking	The device is powered on and the firmware is being upgraded. This LED only applies to over-the-air firmware updates.

Service Display States

Display Icon		Status	Description
No icons		The display is off, and the LED is also off.	The device is powered off or otherwise is not receiving power.
Network signal strength		An antenna with 0-5 bars.	More bars indicate stronger signal.
Message status		An SMS message logo.	If the logo is present, there are unread SMS messages.
Battery status		A battery outline filled with bars; while charging, the bars cycle from 0-4 bars. When fully charged, the bars don't move. When the battery is very low, the battery outline blinks on and off every two seconds. Charge the battery immediately.	More bars indicate more battery life.
Connected Device status		A connected device logo.	If the logo is present, the number of connected devices is displayed.
Roaming status		A device roaming logo.	If the logo is present, the device is currently roaming.

Power Management

Your device will work from its battery or when plugged into a power source.

- **Battery** — Charge the battery by plugging in the wall charger. While the battery is charging the battery icon bars blink. When the battery is fully charged, the battery icon is solid.
- **Wall charger** — You can use the device when the charger is plugged into a wall socket. The MiFi battery charges while it is plugged in.

Before using the MiFi 4620L, read the battery safety information in the "Safety Hazards" section of this guide. (See Proper Battery Use and Disposal on page 86.)

Caring for Your Device

Like any electronic device, the device must be handled with care to ensure reliable operation. Novatel Wireless recommends the following guidelines:

- Protect the device from liquids, dust, and excessive temperatures.
- Do not apply adhesive labels to the device; they might cause the device to potentially overheat and they might alter the performance of the antenna.
- Store the device in a safe place when not in use.

2

Using the MiFi 4620L

Accessing the Network
Using the Device for the First Time
Connecting to the MiFi Device
Using the Device After Setup is Complete

4G LTE

With LTE bandwidth (700 MHz) you can get the broadband-like speed you require to work efficiently outside the home or office. You can connect to the Internet, access your corporate intranet, check your email and download attachments at speeds that are up to 10 times faster than 3G*.

4G Mobile Broadband with LTE*

- Download: typical download speeds of 5-12 Mbps
- Upload: typical upload speeds of 2-5 Mbps

3G Mobile Broadband with EVDO Rev. A**

- Download: typical download speeds of 600 kbps–1.4 Mbps with bursts up to 3.1 Mbps.
- Upload: typical upload speeds of 500-800 kbps with bursts up to 1.8 Mbps.

GSM Mobile Broadband with HSPA+, WCDMA, EDGE and GPRS***

- Download and upload speeds depend on the roaming network.

WiFi 802.11b/g/n

- 802.11b uses the 2.4 GHz frequency with a bandwidth of 11 Mbps.
- 802.11g uses the 2.4 GHz frequency with a bandwidth of 54 Mbps.
- 802.11n uses the 2.4 GHz frequency with a bandwidth of 150 Mbps.

* Speeds shown are those published by Verizon Wireless, Inc. and are theoretical in nature. Actual throughput speed and coverage may vary. Speed claims not applicable when roaming.

** Mobile Broadband Rev.A speed claim based on Verizon Wireless network tests with 5 MB FTP data files without compression. Your Mobile Broadband Rev. A-enabled device will indicate coverage when you are in a Mobile Broadband Rev. A service area. When outside the Rev. A service area, your wireless device will revert to Mobile Broadband Rev. 0 (typical download speeds will be 400–700 Kbps and upload speeds will be 60–80 Kbps).

*** Subject to Customer Agreement, Calling Plan, credit approval, and other service terms.

Using the Device for the First Time

To get started, follow these steps:

1. Confirm your computer meets the minimum system requirements. (See System Requirements on page 3.)
2. Assemble the wall charger. (See Assemble the Wall Charger on page 13.)
3. Install the 4G LTE SIM card. (See Install the 4G LTE SIM Card on page 13.)
4. Insert and charge the battery. (See Insert and Charge the Battery on page 15.)
5. Turn on the device. (See Power the MiFi 4620L On and Off on page 18.)
6. Connect the device to your computer using Wi-Fi. (See Connecting to the Device on page 19.)
7. Connect to MiFi Settings. (See Connect to MiFi Settings on page 19.)

Assemble the Wall Charger

The wall charger comes with a removable plug. You need to connect it before using the MiFi device for the first time. To assemble the wall charger, follow these steps:

1. Remove the plug and the wall charger from the package.
2. Slide the plug on to the wall charger.

Install the 4G LTE SIM Card

To install your new 4G LTE SIM card, follow these steps:

1. Open the cover located on the underside of the MiFi 4620L.
2. Remove SIM card from the outer card, being careful not to touch the gold-colored contacts.
3. Hold the card as shown with the gold-colored contact points facing down.
4. Insert the SIM card into the slot. The 4G SIM card MUST remain in the SIM card slot when in use.

Your SIM (Subscriber Identity Module) card is a small rectangular plastic card that stores your phone number and important information about your wireless service.

CAUTION! Do not bend or scratch your SIM card. Avoid exposing your SIM card to static electricity, water, or dirt.

Remove the 4G LTE SIM Card

To remove the 4G LTE SIM card, follow these steps:

1. Open the SIM card cover located on the underside of the MiFi 4620L. Press down on the small black tab to the left side of the SIM card slot.
2. Gently remove the SIM card from the SIM card slot.

NOTE Should your 4G SIM card be lost or damaged, contact your network operator.

Insert and Charge the Battery

IMPORTANT Before you use your device, be sure to charge the battery for at least three hours to ensure a full initial charge.

To insert and charge the battery, follow these steps:

❶ Insert your fingernail into the indention on the back cover and lift to open the battery compartment, located on the bottom of the device. Set the cover aside.

❷ Align the gold-colored contacts on the battery with the gold-colored contacts on the device and gently slide the battery into place.

❸ Replace the cover by setting it on the device where the notches align, and then press on the cover until it clicks into place.

4. Connect the micro USB end of the charger to the micro USB port of the device.
5. Plug the other end of the AC wall charger into the appropriate electrical outlet. Charge for at least three hours.

CAUTION! Use only batteries and chargers with your device that have been approved by Novatel Wireless. The failure to use approved batteries and chargers may increase the risk that your device will overheat, catch fire, or explode, resulting in serious bodily injury, death, or property damage.

You are now ready to connect your computer or other Wi-Fi device to the MiFi 4620L.

Remove the Battery

To remove or replace the battery, follow these steps:

1. Remove the cover to open the battery compartment, located on the bottom of the device. Set the cover aside.

2. Insert your fingernail into the battery removal divot and lift the battery out of the battery compartment.

Battery Tips

WARNING! Use only batteries and chargers with your device that have been approved by Novatel Wireless. Always use Novatel Wireless original batteries and chargers. The warranty does not cover damage caused by non-Novatel Wireless batteries and/or chargers.

- It normally takes at least three hours to fully charge the battery with the wall charger.
- Do not use sharp objects to access the battery well, this may damage the device and the battery.
- Do not use excessive force to remove the battery or to access the battery well.
- The battery discharges more rapidly as additional devices access your MiFi device.
- Battery life depends on the network, signal strength, temperature, features, and accessories you use.
- Your device also works with an approved car charger.
- New batteries or batteries stored for a long time may take more time to charge.
- When charging your battery, keep it near room temperature.
- When storing your battery, keep it uncharged in a cool, dark, dry place.
- Never expose batteries to temperatures below -20°C (4°F) or above 60°C (140°F).
- Never leave the device in an unattended vehicle due to uncontrollable temperatures that may be outside the desired temperature for this device.
- Some batteries perform best after several full charge/discharge cycles.
- It is normal for batteries to gradually wear down and require longer charging times. If you notice a change in your battery life, it is probably time to purchase a new battery.

IMPORTANT Whenever you remove or insert either the battery or the SIM card, ensure your MiFi device is not connected to any device or power source. Never use tools, knives, keys, pens or any type of object to force the door open or to remove the battery. Using any of these types of objects could result in puncturing the MiFi battery.

WARNING! The failure to use approved batteries and chargers may increase the risk that your device will overheat, catch fire, or explode, resulting in serious bodily injury, death, or property damage. To avoid risk of explosion, never dispose of batteries in a fire.

Power the MiFi 4620L On and Off

Power On

- Press the Power Button until the LED illuminates green or violet.

Power Off

- Press and hold the Power Button until the display shows **MiFi Powering Off** and the LED turns yellow.

Activate Your Device

Your SIM card should come pre-activated and ready to connect. Insert the SIM card, power up the MiFi device, and connect.

If your SIM card did not come pre-activated or you need to re-activate your SIM card, you can:

- go to your network operator's retail store
- contact your network operator's customer service department

IMPORTANT The MiFi 4620L requires an activated account with a wireless carrier to function.

Connecting to the Device

Now you can connect your computer to your MiFi 4620L using Wi-Fi.

Connect to MiFi Settings

To connect to the MiFi 4620L, follow these steps:

1. Turn on your computer and turn on the MiFi 4620L.

   The MiFi 4620L's LED should be slow blinking green or violet, indicating the device is in service and ready to connect. The MiFi 4620L broadcasts its own wireless network.

2. On your computer, use the Wi-Fi manager (Windows) or the AirPort menu bar icon (Mac OS X) to connect wirelessly to the MiFi 4620L wireless network.

   Tip! The steps to connect to a Wi-Fi network vary depending on your operating system and whether you use the native application or third-party software. Generally, you click an icon in the Windows notification area where you can select **View Available Wireless Networks,** or click the Airport icon in the menu bar on a Mac. If you are unfamiliar with wireless networking on your computer, consult the computer help system.

3. Connect to the network name found on the sticker that appears on the back of the MiFi device as well as on the Activation Guide. The network name or SSID is in the format MIFI4620L Jetpack XXXX Secure, where XXXX are four digits unique to your device.

4. Enter the 8-digit Wi-Fi/Admin password. The password appears on the back of the MiFi device as well as on the Activation Guide.

   NOTE If you are entering the SSID manually, please add the word "Secure" after the SSID. For example, "MIFI4620L Jetpack 1A3B Secure".

5. You can change device settings by connecting to the MiFi Settings on-device web page. (See Configuring MiFi Settings on page 22.)

IMPORTANT Charge the battery completely before you connect your computer to your MiFi device. (See Insert and Charge the Battery on page 15.)

Using the Device After Setup is Complete

You can use the MiFi 4620L as a wireless mobile hotspot to connect your computer and/or (up to a total of ten) other Wi-Fi enabled devices to the mobile broadband network.

You can customize the MiFi 4620L's settings using MiFi Settings. (See Configuring MiFi Settings on page 22.)

Normal Use

- The MiFi 4620L is powered on as soon as you press the power button and the display turns on.
- The LED on the device becomes green (4G) or violet (3G) and blinks according to the connection speed.

Setting up a Temporary Hotspot

See Setting Up a Temporary Hotspot on page 30 for more information about setting up a temporary hotspot.

Security for the MiFi 4620L

The MiFi 4620L comes from the factory with security enabled. A sticker on the back panel includes the name of the wireless network (SSID) and the network password. You can change the security settings in the MiFi Settings Wi-Fi screen. (See Wi-Fi on page 28.)

3

MiFi Settings

Configuring MiFi Settings
Login
Quickstart
Wi-Fi
Network
Security
System
Advanced

Configuring MiFi Settings

You can configure the Wi-Fi settings on your device using the easy-to-use MiFi Settings web-based User Interface (MiFi Settings). It allows you to manage, monitor, and customize your Wi-Fi and 4G LTE mobile broadband connection.

The following sections describe how to connect to MiFi Settings, as well as each screen and the corresponding functionality.

Connect to MiFi Settings

To connect to MiFi settings, follow these steps:

1. Turn on your computer and turn on the MiFi 4620L device.

   MiFi 4620L's LED should be slow blinking green (4G) or violet (3G), indicating the device is in service and ready to connect. MiFi 4620L broadcasts its own wireless network.

2. On your computer, use the Wi-Fi manager (Windows) or the AirPort menu bar icon (Mac OS X) to connect wirelessly to the MiFi 4620L wireless network.

   Tip! The steps to connect to a Wi-Fi network vary depending on your operating system and whether you use the native application or third-party software. Generally, you click an icon in the Windows notification area where you can select **View Available Wireless Networks,** or click the Airport icon in the menu bar on a Mac. If you are unfamiliar with wireless networking on your computer, consult the computer help system.

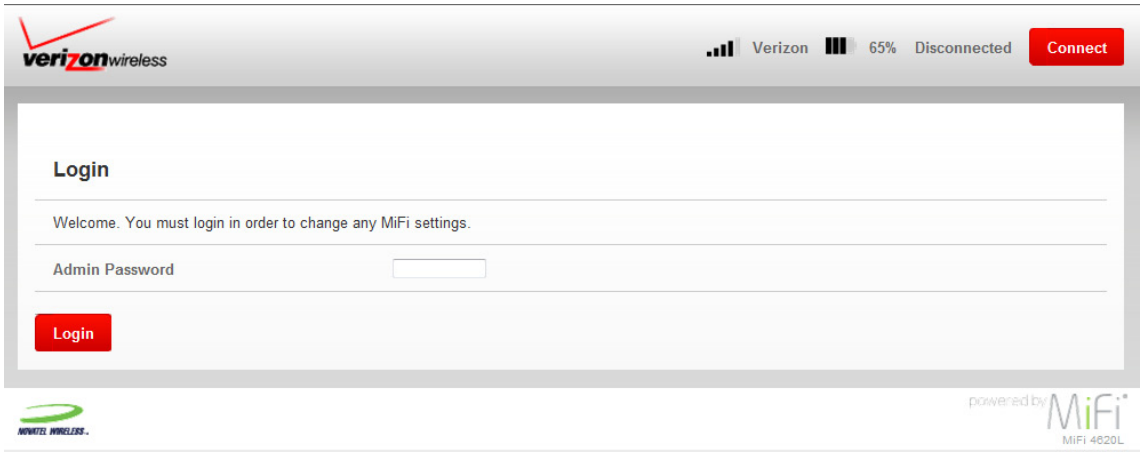
3. Click **Connect** and enter the Wi-Fi/Admin password found on the sticker on the back of the device and on the Activation Guide.

4. Open your browser and type http://vz.hotspot or http://192.168.1.1 into the address bar. Then press the **Enter** or **Return** key. The Welcome Page opens. (See Login on page 23.)

5. Type your Wi-Fi/Admin password in the Login field in the upper right corner of the window and click **Login**. The Login page changes to the Home page. (See Wi-Fi on page 62.)

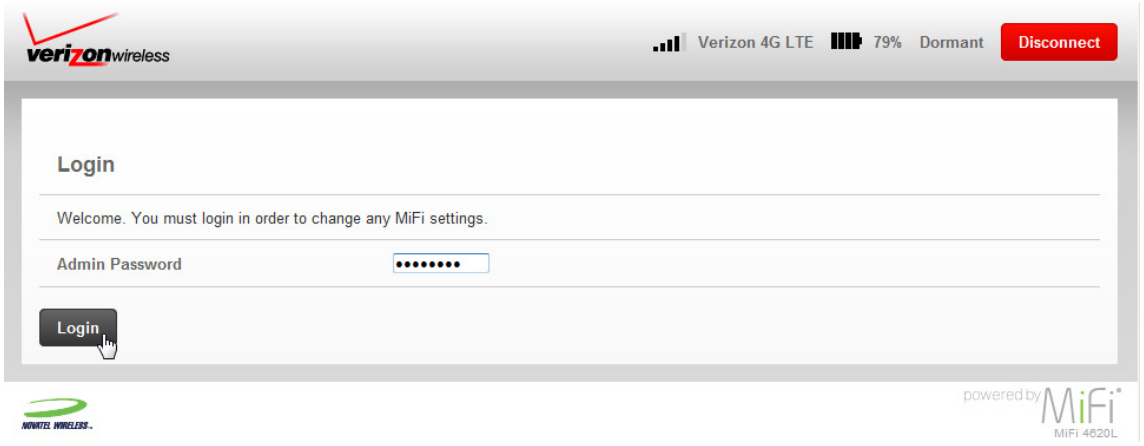
Login

The Login page is the first page you see after connecting and prior to logging in. It contains the status bar, the **Connect/Disconnect** button, and the **Login** button. You can access more information after you log in.



Login

Type the password (the default password is found on the sticker on the back of the MiFi device, and on the back of the Quick Start Guide) in the Login field at the top right corner of the window.



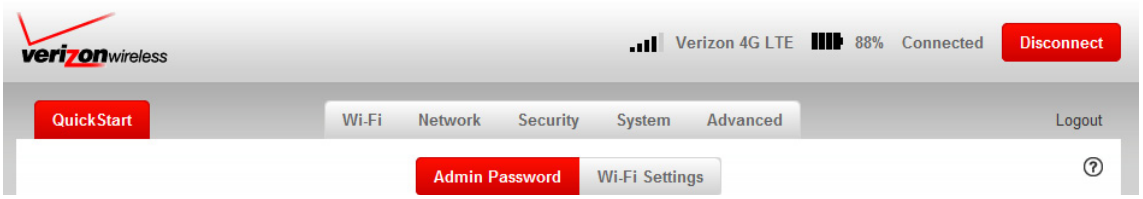
Menu Bar

The Menu Bar is the primary navigation for MiFi Settings. You can access each feature under the appropriate menu.

Quick Start

The QuickStart menu allows you to quickly change the security settings (administration password and Wi-Fi settings) for your MiFi 4620L. The QuickStart screen has the following options:

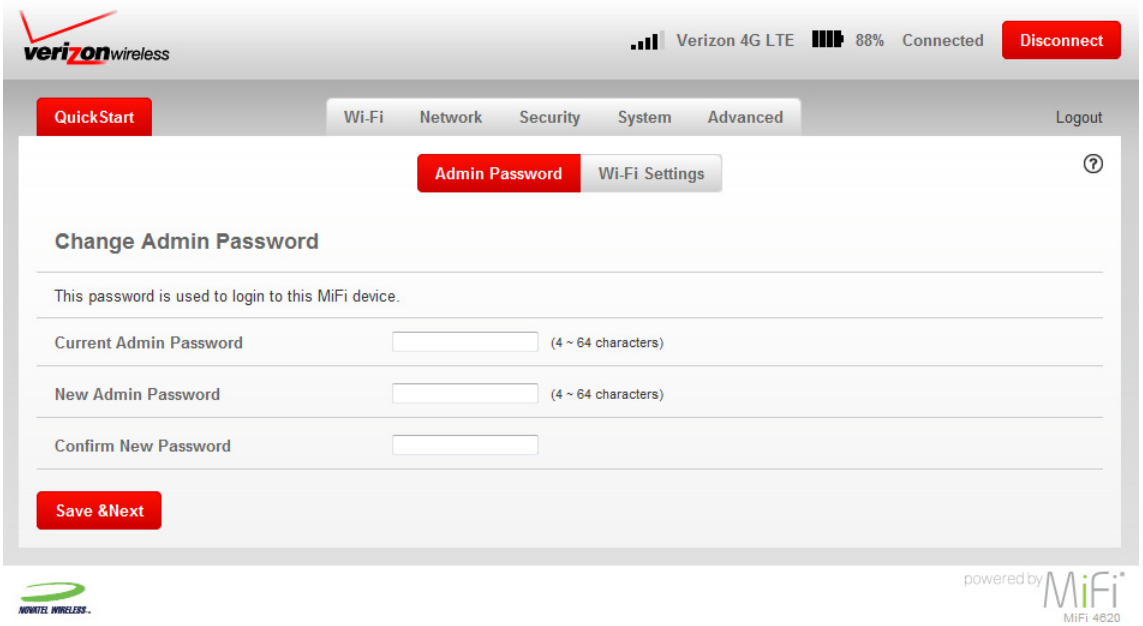
- **Admin Password** (See Admin Password on page 24.)
- **Wi-Fi Settings** (See Wi-Fi Settings on page 27.)



Admin Password

The Admin Password screen has the following section:

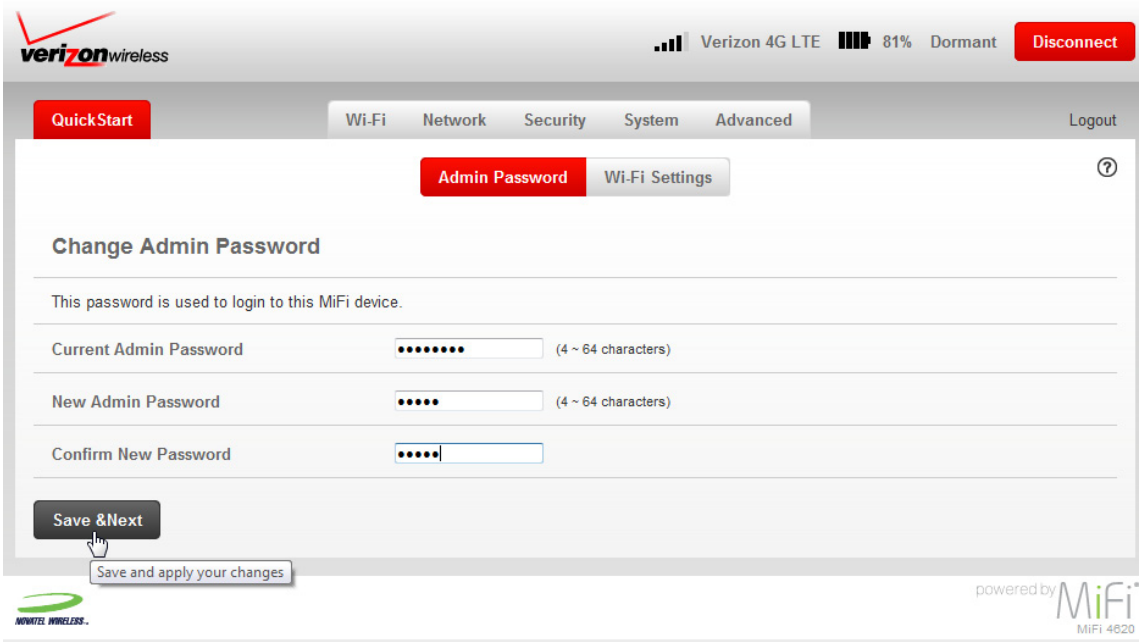
- **Change Admin Password** (See Change Admin Password on page 25.)



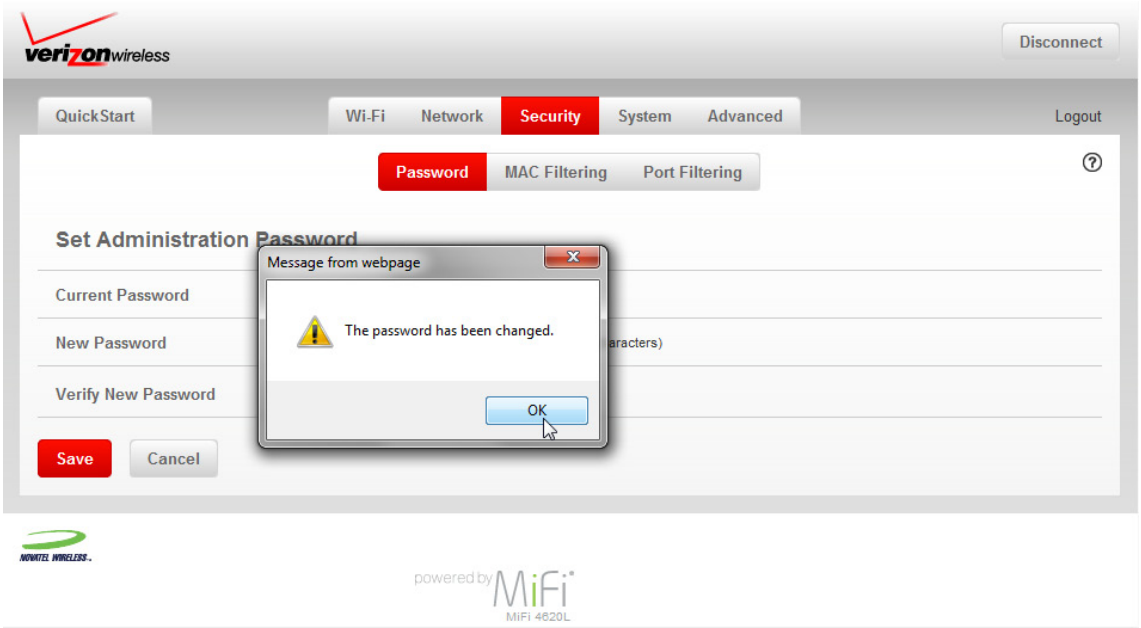
Change Admin Password

To change the administration password used to login to the MiFi device from the QuickStart screen, follow these steps:

1. Enter your current password in the Current Admin Password box.
2. Enter your new password in the New Admin Password box.
3. Re-enter your new password in the Confirm New Password box.
4. Click **Save & Next.**



❺ A screen displays confirming that your password has been changed. Click **OK**.



Buttons

- **Save & Next** — Click this button to save any changes made to the administration password.
- **Save** — Click this button to save any changes made to the password settings.
- **Cancel** — Click this button to cancel any changes made to the password settings.

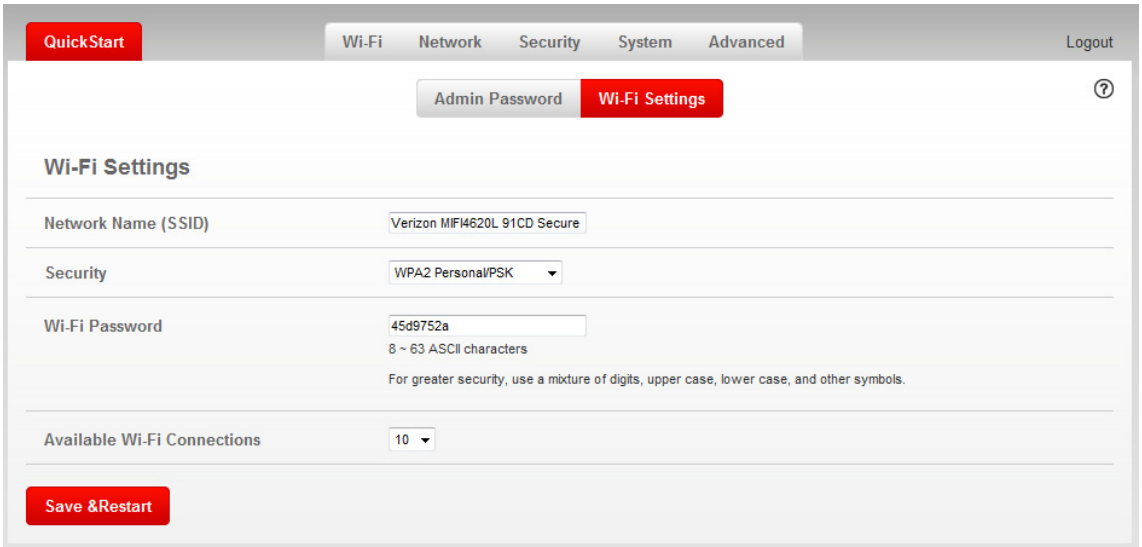
Wi-Fi Settings

The Wi-Fi Settings screen has the following options:

- Network Name (SSID)
- Security
- Wi-Fi Password
- Available Wi-Fi Connections

To change your Wi-Fi security, password and/or connection settings, follow these steps:

1. Select the desired settings from the security, Wi-Fi password and/or available Wi-Fi connections drop down menu(s).
2. Click **Save & Restart**.



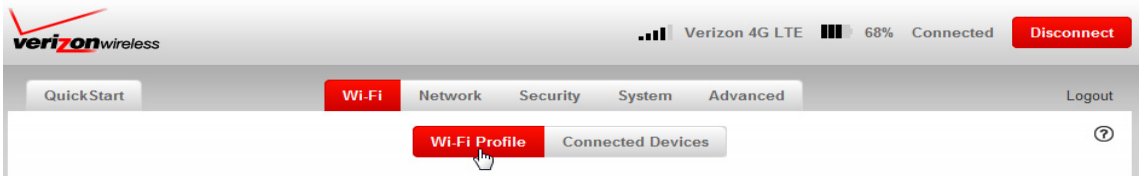
Buttons

- **Save & Restart** — Click this button to save any changes made to Wi-Fi settings and to restart your device.

Wi-Fi

The Wi-Fi menu allows you to customize the Wi-Fi profiles and view details about the devices connected to your device. The Wi-Fi menu has the following menu options:

- **Wi-Fi Profile** (See Wi-Fi Profile on page 28.)
- **Connected Devices** (See Connected Devices on page 32.)

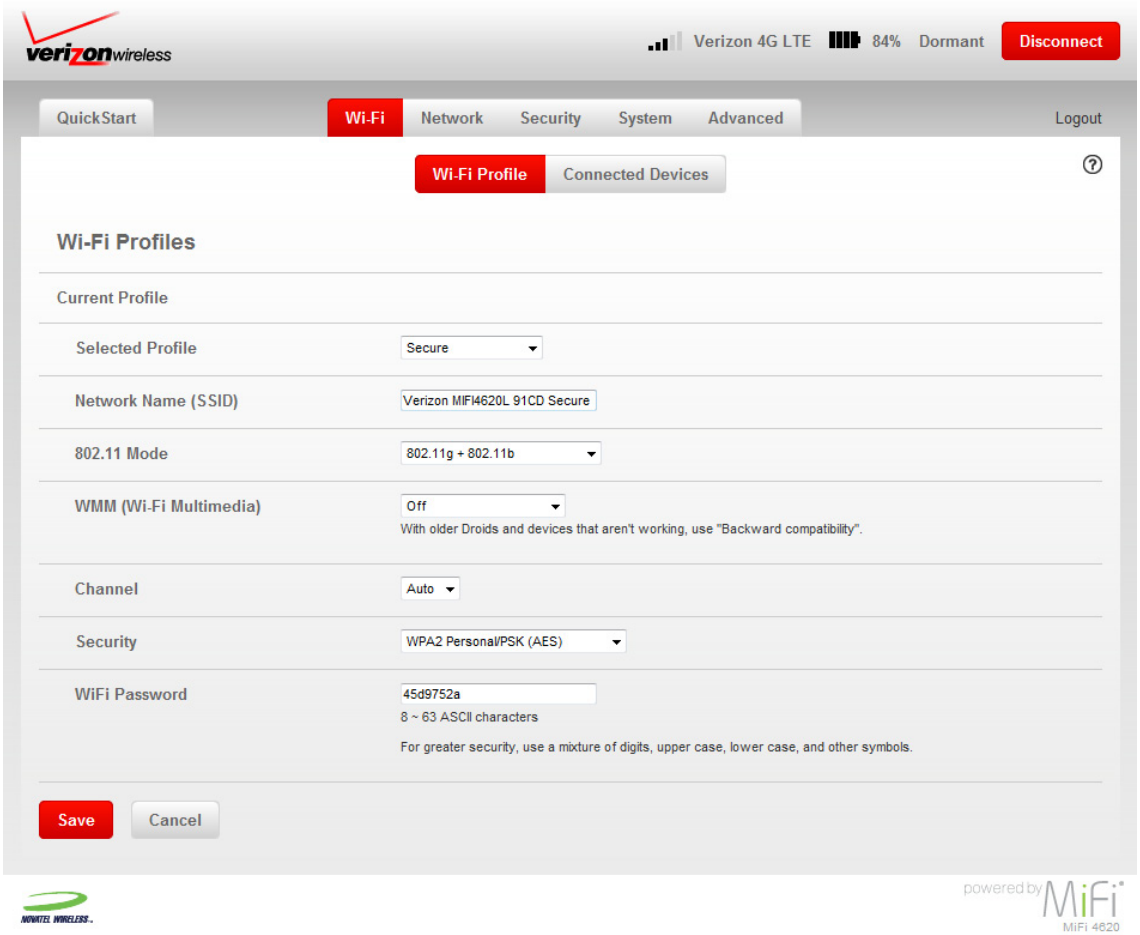


Wi-Fi Profile

The Wi-Fi Profile screen has the following options:

- **Current Profile** — The wireless (802.11) profile currently in use.
- **Selected Profile** — The profile settings shown on the page. (See Changing to a Different Profile on page 30.)
- **Network Name (SSID)** — The name of the MiFi 4620L device's wireless network.
- **802.11 Mode** — The wireless network technology used. **802.11g + 802.11b + 802.11n** is most compatible, allowing both 802.11b, 802.11g, and 802.11n devices to connect to the wireless network.
- **WMM** — Wi-Fi Multimedia. Enables your device to stream multimedia files.
- **Channel** — If available, select **Auto**. With this setting, MiFi 4620L selects the best available channel. If the **Auto** setting is not available, you can experiment to see which channel provides the best results, or use the default setting.

- **Security** — The security type used to encrypt the wireless network.
  - WEP 64-bit (least secure, more compatible with older devices)
  - WEP 128-bit
  - WPA Personal/PSK (TKIP)
  - WPA2 Personal/PSK (AES)
  - WPA/WPA2 Personal Mixed Mode (most secure, less compatible with older devices)
- **Wi-Fi Password**



IMPORTANT You should use the Secure profile with the WPA/WPA2 Personal Mixed Mode security setting whenever possible.

Choosing a Profile

Your device comes with the Secure profile already set. The following profiles come with your device:

- **Secure** — This is the profile you should use most of the time. You can set up this profile with the security measures you need to use your device safely.
- **Temporary Hotspot** — This profile allows you set up a temporary hotspot to allow others nearby (maximum of ten) to go online at the same time.
- **Open** — This profile is not secure and should be avoided.

Setting Up a Temporary Hotspot

You can use the device to set up a temporary hotspot to allow a maximum of ten connections to your MiFi 4620L at one time.

The Temporary Hotspot profile is pre-set on your device. It generates a temporary network name (SSID) and network key so you can allow others to connect to your device without having to change your secure profile's security settings. To set up a Temporary Hotspot, follow these steps:

1. Connect to MiFi Settings and log in. (See Configuring MiFi Settings on page 22.)
2. Go to the Wi-Fi screen. (See Wi-Fi on page 28.)
3. On the Wi-Fi screen, select Temporary Hotspot as the selected profile.

   A new (temporary) network name (SSID) and network key (Wi-Fi passkey) appears. Typically the temporary network name has the word "Temp" added.
4. Click **Generate** to create a new network name and network key.

   You should write down the new network name and network key.
5. Click **Apply**. Others can now use the temporary network name (SSID) and network key to connect to your device.

   (See Wi-Fi on page 28.) for more information about changing profiles.

Changing to a Different Profile

To use a different profile, follow these steps:

1. Click the Selected Profile pop-up menu and choose a different profile.
2. Wait a moment for the web page to update with the Wi-Fi settings for the selected profile.
3. Click **Apply** to change to the new profile settings.

IMPORTANT Changing the profile ends all Wi-Fi connections to MiFi 4620L, including the current connection to MiFi Settings. You **must** re-connect your computer to MiFi 4620L using the new profile's Wi-Fi settings.

Be sure to write down the new network key (Wi-Fi passkey) before you finish changing the profile.

Updating the Current Profile

To update the current profile, follow these steps:

1. Keep the same profile in the Selected Profile pop-up menu.
2. Make changes to the profile settings.
3. Click **Apply**.
   - If you change the Network Name (SSID), security method, or network key you will need to re-connect with the Wi-Fi manager on your computer.
   - If you change other settings, your computer will re-connect automatically after MiFi 4620L restarts.

Tip! Some Wi-Fi clients become confused if the security is changed and the network name is not. If you change security settings and do not get asked for the new network key when you try to reconnect, delete the existing old network name from your Preferred Networks list on your wireless device. Then you can reconnect.

IMPORTANT Changing the Network Name (SSID), security method, or network key (Wi-Fi passkey) ends all Wi-Fi connections to MiFi 4620L, including the current connection to MiFi Settings. You **must** re-connect your computer to MiFi 4620L using the new profile's Wi-Fi settings.

Be sure to write down the new network key (Wi-Fi passkey) before you finish changing the profile.

Updating a Profile Not Currently in Use

To update a profile not currently in use, follow these steps:

1. Change the Selected Profile pop-up menu to a different profile.
2. Wait a moment for the web page to update with the Wi-Fi settings for the selected profile.
3. Change the settings.

   NOTE The Temporary Hotspot profile cannot be changed directly. You must click **Generate** to generate a new network name (SSID) and network key.

4. Click **Update Profile** to save the changes.

   OR

   Click **Apply** to update the profile and also make it the current profile.

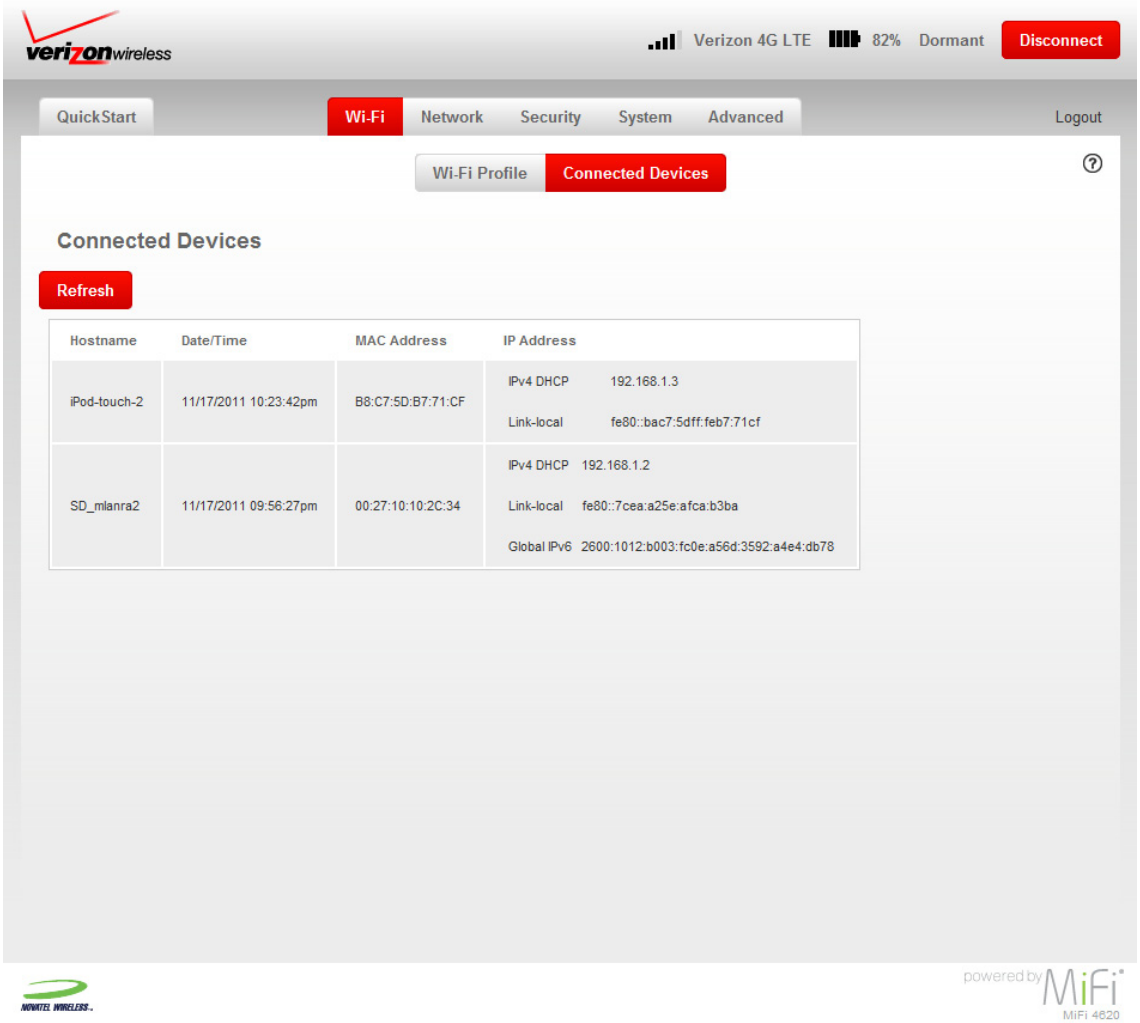
Buttons

- **Save** — Click this button to save any changes made to your current profile.
- **Cancel** — Click this button to cancel any changes made to your current profile.

Connected Devices

The Connected Devices section has the following:

- **Hostname** — The network name for the connected device (if available).
- **Date/Time** — The date/time the device was detected by the network.
- **MAC Address** — The Media Access Controller (MAC) or physical address for MiFi 4620L.
- **IP Address** — The IP address for MiFi 4620L.



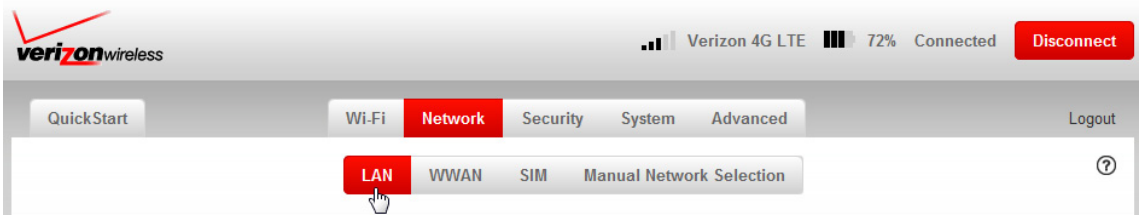
Buttons

- **Refresh** — Click this button to refresh connected devices information.

Network

The Network menu provides detailed LAN, WWAN and SIM information and configuration options, and a manual network selection option. The Network menu has the following options:

- **LAN** (See LAN on page 34.)
- **WWAN** (See WWAN on page 36.)
- **SIM** (See SIM on page 41.)
- **Manual Network Selection** (See Manual Network Selection on page 42.)



LAN

The LAN menu takes you to the LAN screen. The LAN screen gives you settings and information about MiFi 4620L's network. The LAN screen has the following sections:

- **IPv4** (See IPv4 on page 34.)
- **IPv6** (See IPv6 on page 35.)

IPv4

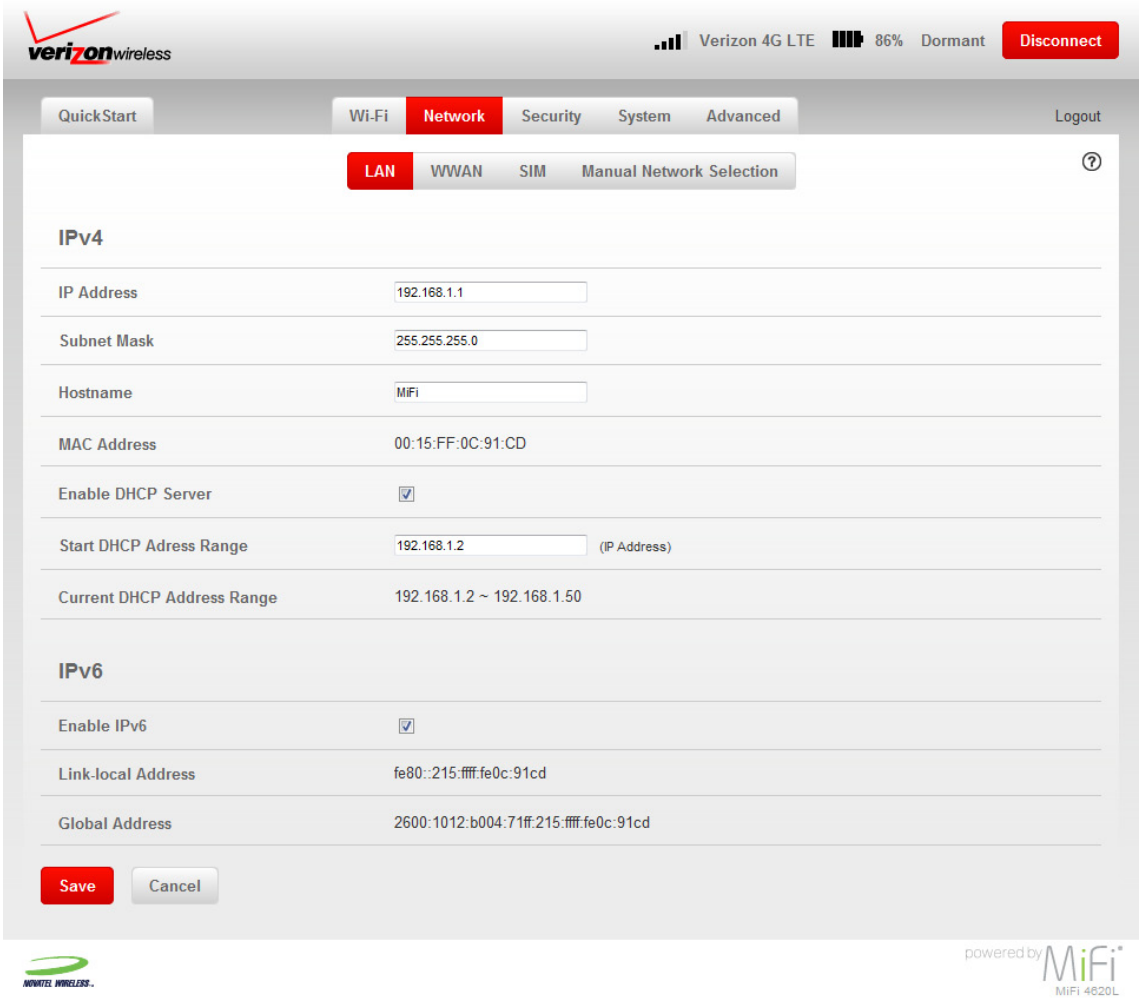
The IPv4 section has the following options:

- **IP Address** — The IP address for MiFi 4620L.
- **Subnet Mask** — The subnet mask network setting for MiFi 4620L. The default value 255.255.255.0 is standard for small (class "C") networks. If you change the LAN IP Address, ensure you use the correct Subnet Mask for the IP address range containing the LAN IP address.
- **Hostname** — The network name for the connected device (if available).
- **MAC Address** — The Media Access Controller (MAC) or physical address for MiFi 4620L.
- **Enable DHCP Server** — The **Enable DHCP Server** checkbox enables or disables the DHCP Server feature.
- **Start DHCP Address Range** — The start range of IP addresses reserved for use by MiFi 4620L's DHCP server table.
- **Current DHCP Address Range** — The current range of IP addresses reserved for use by MiFi 4620L's DHCP server table. If a device with a static IP address wants to connect to MiFi 4620L's network, the static IP should be outside of the DHCP address range. Most devices do not have a static IP.

IPv6

The IPv6 section has the following options:

- **Enable IPv6** — The **Enable IPv6** checkbox enables or disables the IPv6 feature.
- **Link Local Address** — Displays the local address when IPv6 is enabled.
- **Global Address** — Displays the global address when IPv6 is enabled.



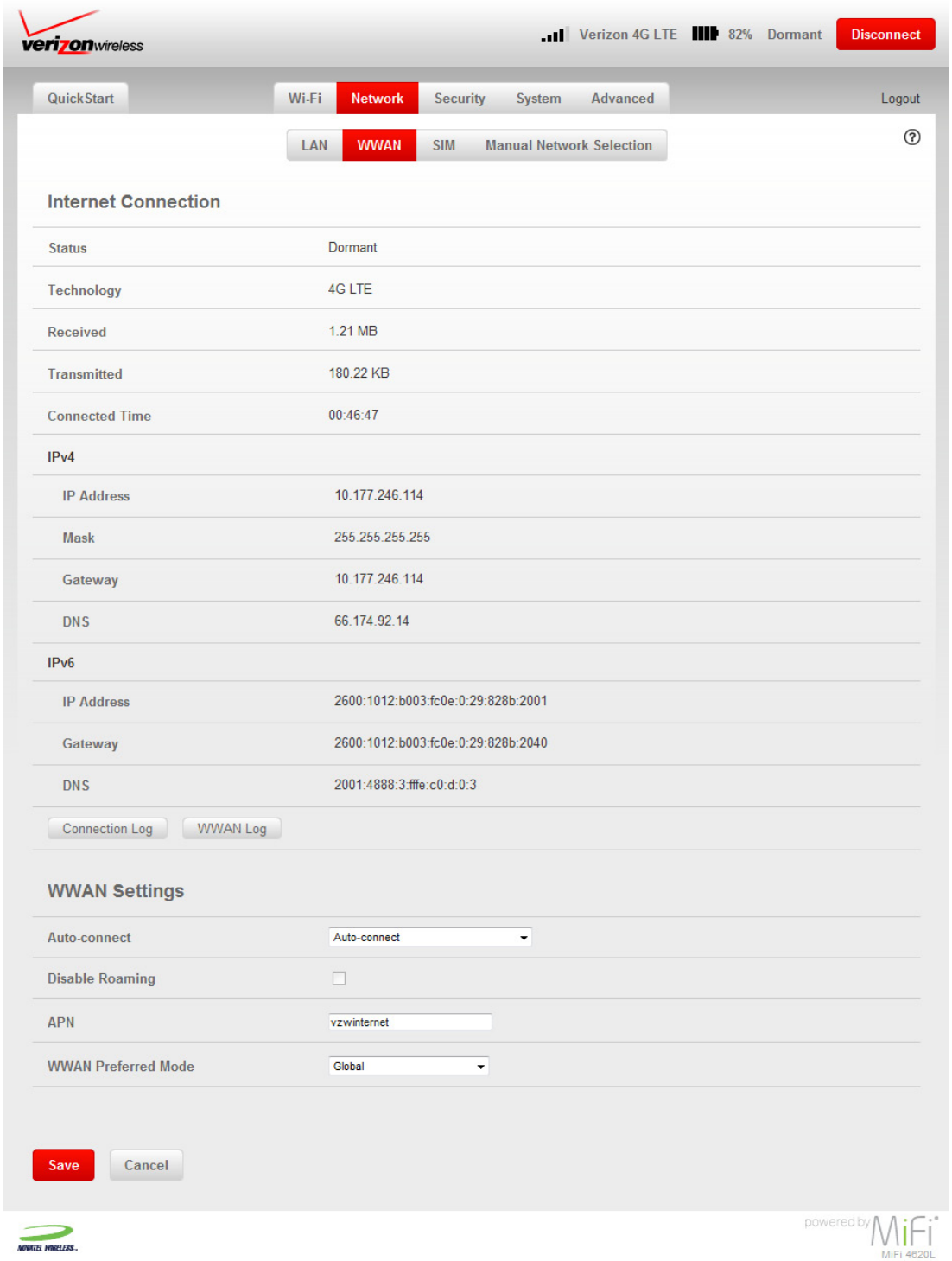
Buttons

- **Save** — Click this button to save changes.
- **Cancel** — Click this button to cancel any changes.

WWAN

The WWAN menu takes you to the WWAN screen. The WWAN screen gives you settings and information about MiFi 4620L's network. This is also where you can disable global roaming. The WWAN screen has the following sections:

- **Internet Connection** (See Internet Connection on page 37.)
- **WWAN Settings** (See WWAN Settings on page 40.)



Internet Connection

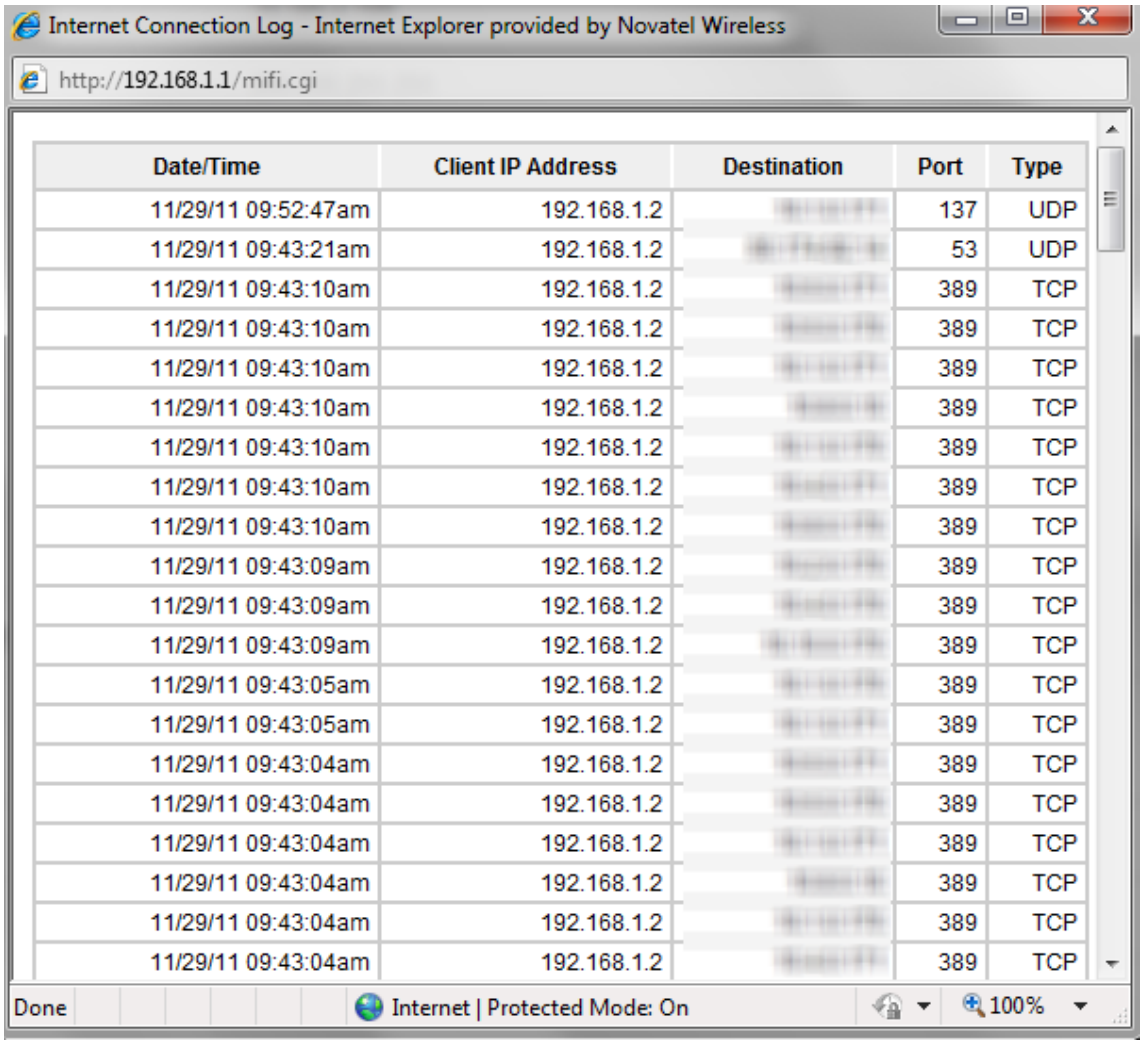
The Internet Connection section shows device settings and status and includes the following:

- **Status** — The status of the Internet connection, usually **Connected** or **Disconnected**.
- **Technology** — The type of technology used to connect to the Internet.
- **Received** — The amount of data received from the network.
- **Transmitted** — The amount of data sent to the network.
- **Connected Time** — How long the device has been connected to the network.
- **IPv4**
  - **IP Address** — The Internet Protocol (IP) address that identifies this device on the network.
  - **Mask** — The mask is a standard address that covers the MiFi device's network behind the larger Internet.
  - **Gateway** — The address of the server used to access the Internet.
  - **DNS** — The address of the Domain Name Server (DNS).
- **IPv6**
  - **IP Address** — The Internet Protocol (IP) address that identifies this device on the network.
  - **Gateway** — The address of the server used to access the Internet.
  - **DNS** — The address of the Domain Name Server (DNS).

Connection Log

Click the **Connection Log** button to access the WWAN settings connection log. The **Connection Log** has the following:

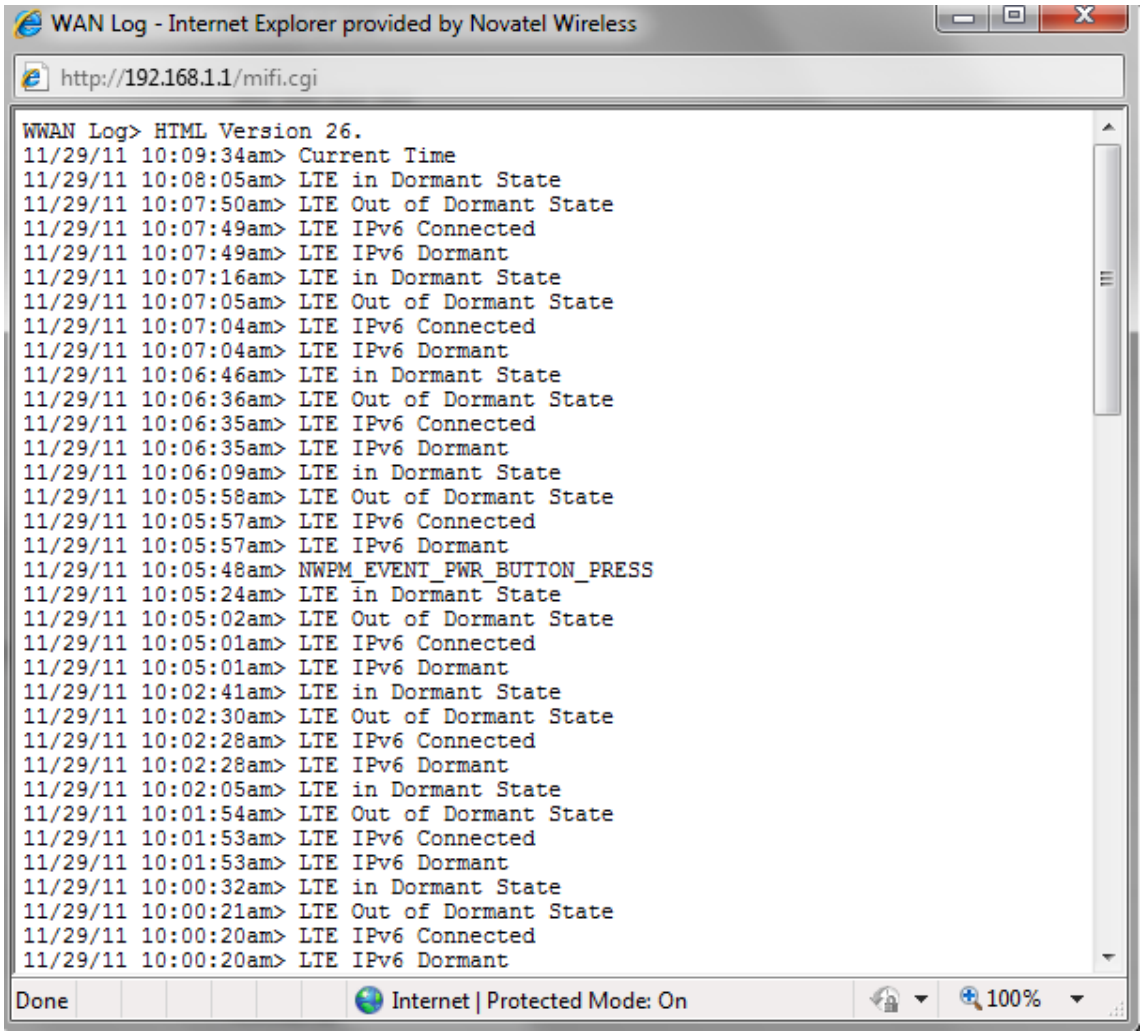
- **Date/Time** — The date/time the device was detected by the network.
- **Client IP Address** — The client IP address for the connected device.
- **Destination** — The destination IP address.
- **Port** — Identifies the port used for the connection.
- **Type** — This can be **UDP** or **TCP**.



Date/Time	Client IP Address	Destination	Port	Type
11/29/11 09:52:47am	192.168.1.2		137	UDP
11/29/11 09:43:21am	192.168.1.2		53	UDP
11/29/11 09:43:10am	192.168.1.2		389	TCP
11/29/11 09:43:10am	192.168.1.2		389	TCP
11/29/11 09:43:10am	192.168.1.2		389	TCP
11/29/11 09:43:10am	192.168.1.2		389	TCP
11/29/11 09:43:10am	192.168.1.2		389	TCP
11/29/11 09:43:10am	192.168.1.2		389	TCP
11/29/11 09:43:10am	192.168.1.2		389	TCP
11/29/11 09:43:09am	192.168.1.2		389	TCP
11/29/11 09:43:09am	192.168.1.2		389	TCP
11/29/11 09:43:09am	192.168.1.2		389	TCP
11/29/11 09:43:05am	192.168.1.2		389	TCP
11/29/11 09:43:05am	192.168.1.2		389	TCP
11/29/11 09:43:04am	192.168.1.2		389	TCP
11/29/11 09:43:04am	192.168.1.2		389	TCP
11/29/11 09:43:04am	192.168.1.2		389	TCP
11/29/11 09:43:04am	192.168.1.2		389	TCP
11/29/11 09:43:04am	192.168.1.2		389	TCP
11/29/11 09:43:04am	192.168.1.2		389	TCP

WWAN Log

Click the **WWAN Log** button to access the WWAN log. The **WWAN Log** records network events. This data is useful for troubleshooting. Click this button to view the log data in a new window.


WAN Log - Internet Explorer provided by Novatel Wireless
http://192.168.1.1/mifi.cgi
WWAN Log> HTML Version 26.
11/29/11 10:09:34am> Current Time
11/29/11 10:08:05am> LTE in Dormant State
11/29/11 10:07:50am> LTE Out of Dormant State
11/29/11 10:07:49am> LTE IPv6 Connected
11/29/11 10:07:49am> LTE IPv6 Dormant
11/29/11 10:07:16am> LTE in Dormant State
11/29/11 10:07:05am> LTE Out of Dormant State
11/29/11 10:07:04am> LTE IPv6 Connected
11/29/11 10:07:04am> LTE IPv6 Dormant
11/29/11 10:06:46am> LTE in Dormant State
11/29/11 10:06:36am> LTE Out of Dormant State
11/29/11 10:06:35am> LTE IPv6 Connected
11/29/11 10:06:35am> LTE IPv6 Dormant
11/29/11 10:06:09am> LTE in Dormant State
11/29/11 10:05:58am> LTE Out of Dormant State
11/29/11 10:05:57am> LTE IPv6 Connected
11/29/11 10:05:57am> LTE IPv6 Dormant
11/29/11 10:05:48am> NWPM_EVENT_PWR_BUTTON_PRESS
11/29/11 10:05:24am> LTE in Dormant State
11/29/11 10:05:02am> LTE Out of Dormant State
11/29/11 10:05:01am> LTE IPv6 Connected
11/29/11 10:05:01am> LTE IPv6 Dormant
11/29/11 10:02:41am> LTE in Dormant State
11/29/11 10:02:30am> LTE Out of Dormant State
11/29/11 10:02:28am> LTE IPv6 Connected
11/29/11 10:02:28am> LTE IPv6 Dormant
11/29/11 10:02:05am> LTE in Dormant State
11/29/11 10:01:54am> LTE Out of Dormant State
11/29/11 10:01:53am> LTE IPv6 Connected
11/29/11 10:01:53am> LTE IPv6 Dormant
11/29/11 10:00:32am> LTE in Dormant State
11/29/11 10:00:21am> LTE Out of Dormant State
11/29/11 10:00:20am> LTE IPv6 Connected
11/29/11 10:00:20am> LTE IPv6 Dormant
Done
Internet | Protected Mode: On
100%

WWAN Settings

To configure the settings, follow these steps:

❶ Select the device connection method from the Auto-connect drop-down menu. The connection choices are **Auto-connect**, **Auto-connect except with roaming**, or **Manual**.

❷ Global roaming is enabled by default. To disable global roaming, select the **Disable Roaming** checkbox.

NOTE The APN and HSPA APN are Access Point Names that the device uses to connect to the Internet. These are automatically provided by your wireless carrier. Entering an incorrect name in either of these fields will prevent Internet access.

❸ Select the WWAN Preferred Mode from the WWAN Preferred Mode drop-down menu to select the type of technology you want to use to connect to the Internet. The Preferred Mode choices are **Global, CDMA Auto (1XRTT, EVDO), LTE only, 1XRTT only, EVDO only,** or **HSPA only**.

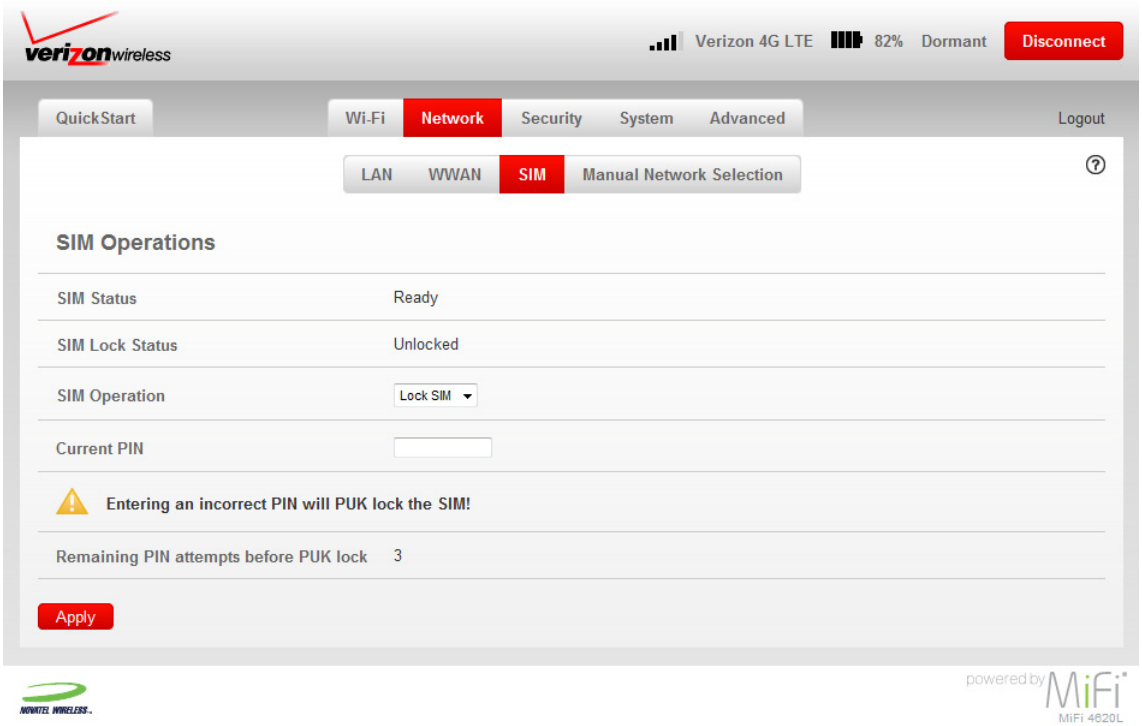
Buttons

- **Save** — Click this button to save changes.
- **Cancel** — Click this button to cancel any changes.

SIM

The SIM menu takes you to the SIM screen. The SIM screen gives you settings and information about MiFi 4620L's SIM card. The SIM screen has the following section:

- **SIM Operations** (See SIM Operations on page 41.)



SIM Operations

The SIM Operations section has the following:

- **SIM Status** — Indicates the current SIM status, usually one of the following: no SIM, invalid SIM, PIN lock, PUK lock, ready, or SIM error.
- **SIM Lock Status** — Locked or unlocked.
- **SIM Operation** — Lock SIM or unlock SIM.
- **Current PIN** — Required to lock SIM.

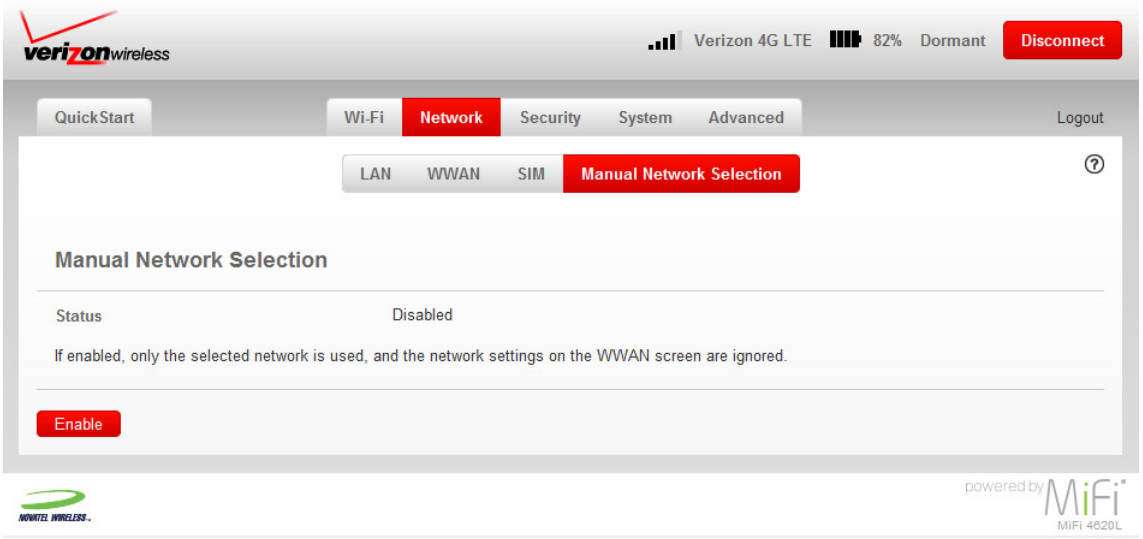
IMPORTANT Entering an incorrect PIN will lock the SIM.

Buttons

- **Apply** — Click this button to apply any changes.

Manual Network Selection

The Manual Network Selection menu takes you to the Manual Network Selection screen. The Manual Network Selection screen tells you whether manual network selection is enabled or disabled. If manual network selection is enabled, only the selected network is used, and the network settings on the WWAN screen are ignored.



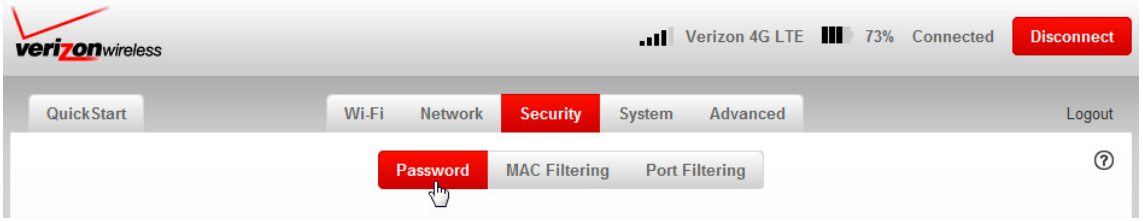
Buttons

- **Enable** — Click this button to enable manual network selection.
- **Disable** — Click this button to disable manual network selection.

Security

The Security menu allows you to change your Administration password, and enable and configure MAC and Port filtering. The Security menu has the following options:

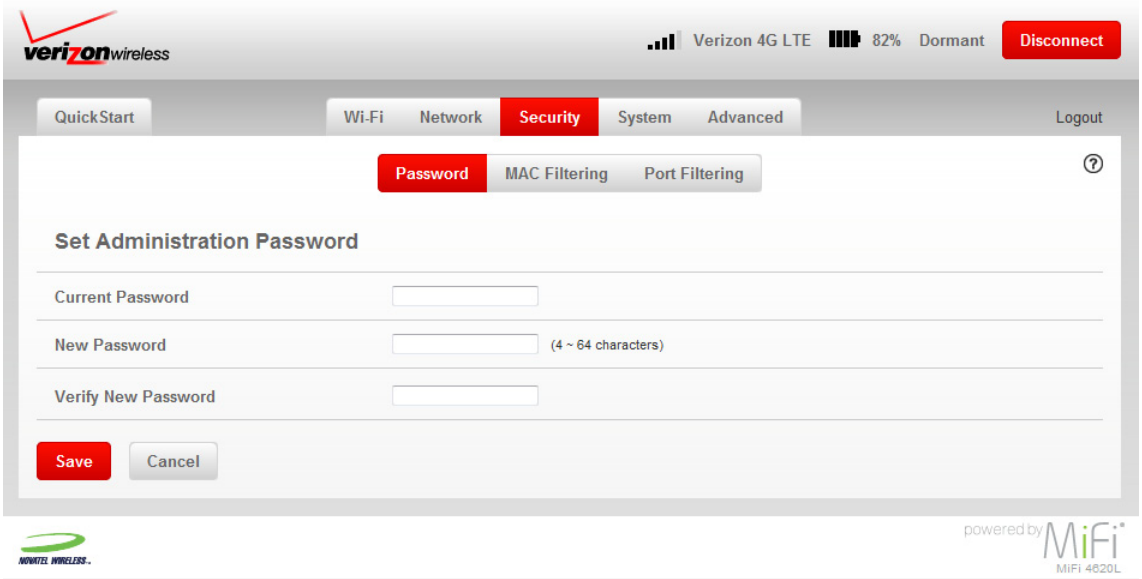
- **Password** (See Password on page 44.)
- **MAC Filtering** (See MAC Filtering on page 45.)
- **Port Filtering** (See Port Filtering on page 49.)



Password

The Password screen enables you to set the administration password. This is the password you use to log in to MiFi Settings. The Password screen has the following section:

- **Set Administration Password** (See Set Administration Password on page 44.)



Set Administration Password

To set or change the administration password, follow these steps:

1. Type your current password in the **Current Password** box.
2. Type the new password (it must have between 4 and 64 characters) in the **New Password** box.
3. Type it again in the **Verify New Password** box.
4. Click **Apply**.

Next time you log in to MiFi Settings, you need to use the new password.

Buttons

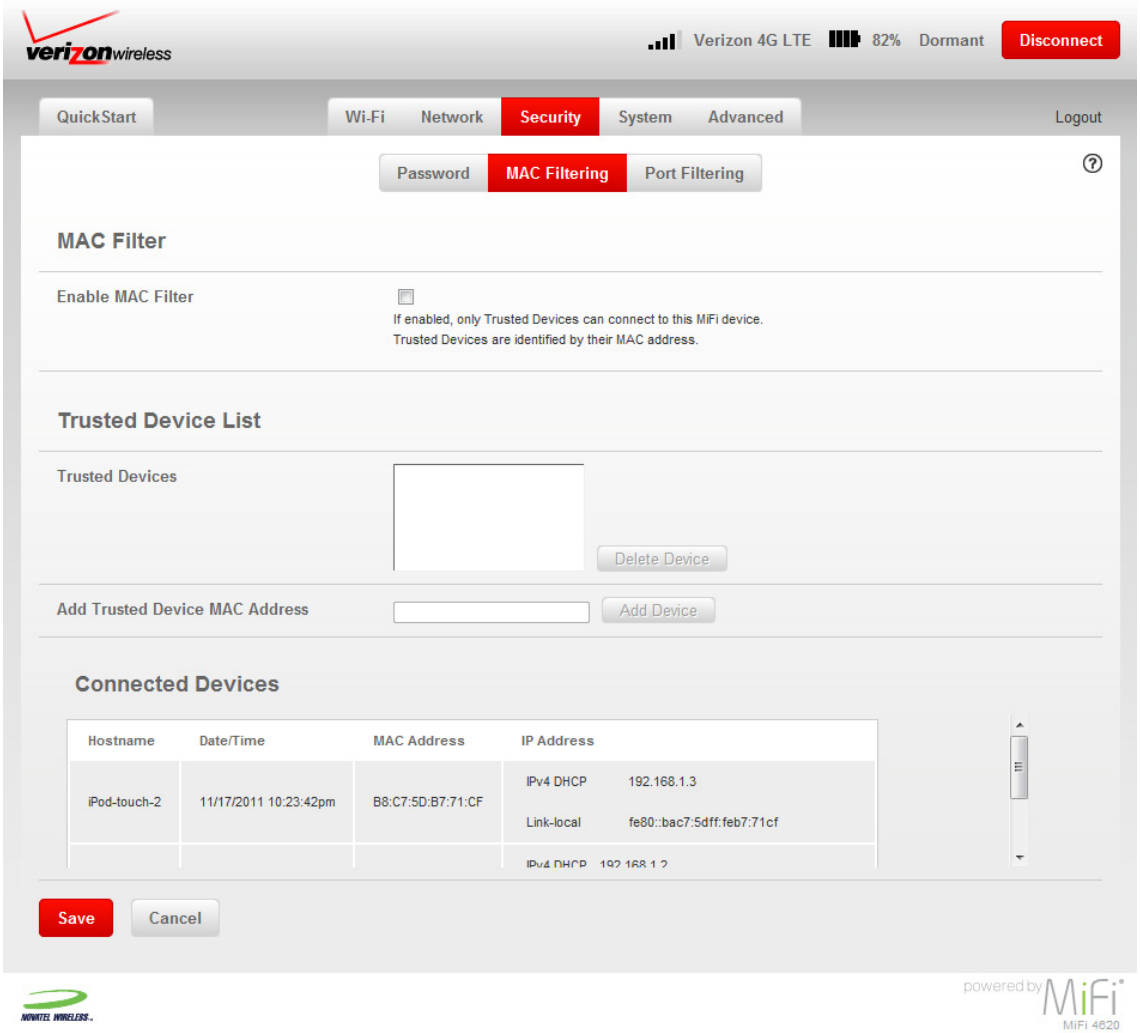
- **Save** — Click this button to save any changes made to the password settings.
- **Cancel** — Click this button to cancel any changes made to the password settings.

IMPORTANT Record your administration password. If you forget it, you have to reset the device before you can use MiFi Settings. (See How do I reset the MiFi 4620L back to factory settings? on page 76.)

MAC Filtering

The MAC Filtering screen enables you to allow specific devices to connect to MiFi 4620L's wireless network. For example, if you put the MAC address for your Wi-Fi-enabled mobile phone and the MAC addess for your computer in the **Trusted Device List**, then only those devices can connect to your device. The MAC Filtering screen has the following sections:

- **MAC Filter** (See MAC Filter on page 46.)
- **Trusted Device List** (See Trusted Device List on page 47.)
- **Connected Devices** (See Connected Devices on page 48.)



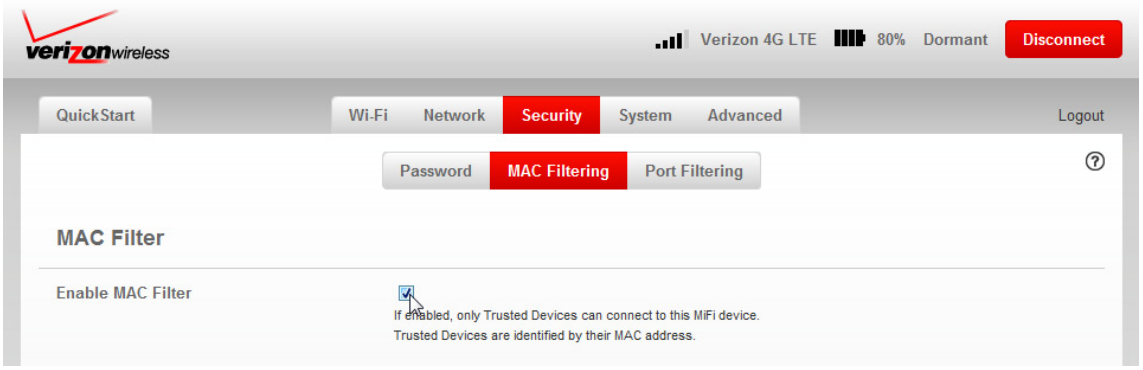
Trusted devices still need the correct network name (SSID) and network key (Wi-Fi passkey).

NOTE The MAC address on the Windows operating system is called the **Physical Address**.

IMPORTANT Do not enable MAC filtering unless you have added your own computer's MAC address to the trusted device list. Otherwise you will be unable to access the device.

MAC Filter

The **Enable MAC Filter** checkbox enables or disables the MAC Filter feature.



- When the feature is **enabled** (checked), you must add the MAC address for the device to the Trusted Device List. If a device not in the list tries to connect to the MiFi 4620L wireless network, the connection is blocked even if the device has the correct network name (SSID) and network key (Wi-Fi passkey).
- When the feature is **disabled** (un-checked), any device with the correct network name (SSID) and network key (Wi-Fi passkey) can connect to the MiFi 4620L wireless network.

Find the MAC Address on a Computer

The Media Access Controller (MAC) Address is also known as a hardware or physical address for a device (usually a network adapter). It consists of six pairs of numbers and letters (for example, 00-21-9B-1C-64-34).

You can view the MAC address for any device connected to the MiFi wireless network from the Wi-Fi screen. (See Wi-Fi Settings on page 27.)

Tip! You can cut and paste your computer's MAC address from the Wi-Fi Clients section of the Wi-Fi screen.

If the computer is not connected to the MiFi wireless network, you can find the MAC address directly. To find the MAC address, follow one of these steps:

- On a Windows PC, the MAC address is the Physical Address. You can find the Physical Address by running **ipconfig /all** from the cmd window.
  - » To run **ipconfig/all**, select **Start > All Programs** (or **Programs**) > **Accessories** > **Command Prompt** to open the Command Prompt window. Then type **ipconfig/all** and press the **Return** or **Enter** key.
- On a Mac, the MAC address is the AirPort ID.
  - » To find the AirPort ID, open the **Apple Menu** > **System Preferences** > **Network**. In the list, click **AirPort**. Click **Advanced**. A sheet opens. Click the **AirPort** tab. The AirPort ID is at the bottom of the sheet.

IMPORTANT Windows only: Make sure you get the MAC address for the wireless network adapter and not the Ethernet controller (NIC), if the computer has both.

Trusted Device List

The Trusted Device List section displays the MAC address(es) of trusted devices. Only devices in the Trusted Device List are able to connect to the MiFi 4620L wireless network.

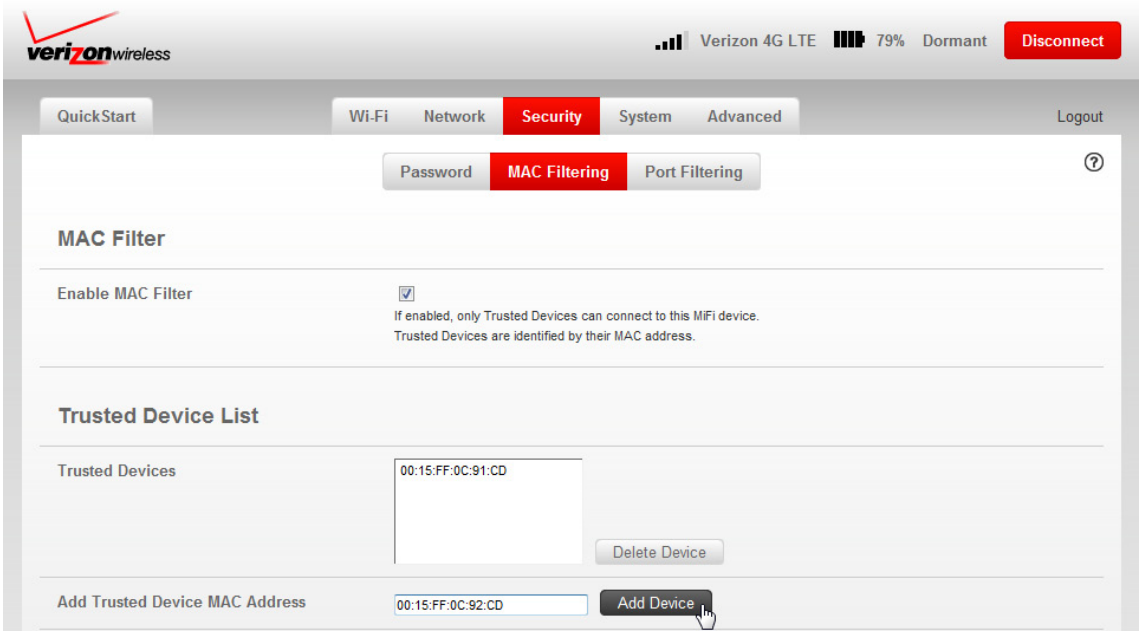
Add Trusted Device MAC Address

To add a device to the Trusted Device List, follow these steps:

1. Type the Wi-Fi-enabled device's MAC address in the **Trusted Devices** field. You can use either ":" or "-" as the separator (for example, 00:21:9B:1C:64:34 or 00-21-9B-1C-64-34).

   Tip! You can cut and paste your computer's MAC address from the Wi-Fi Clients section of the Wi-Fi screen.

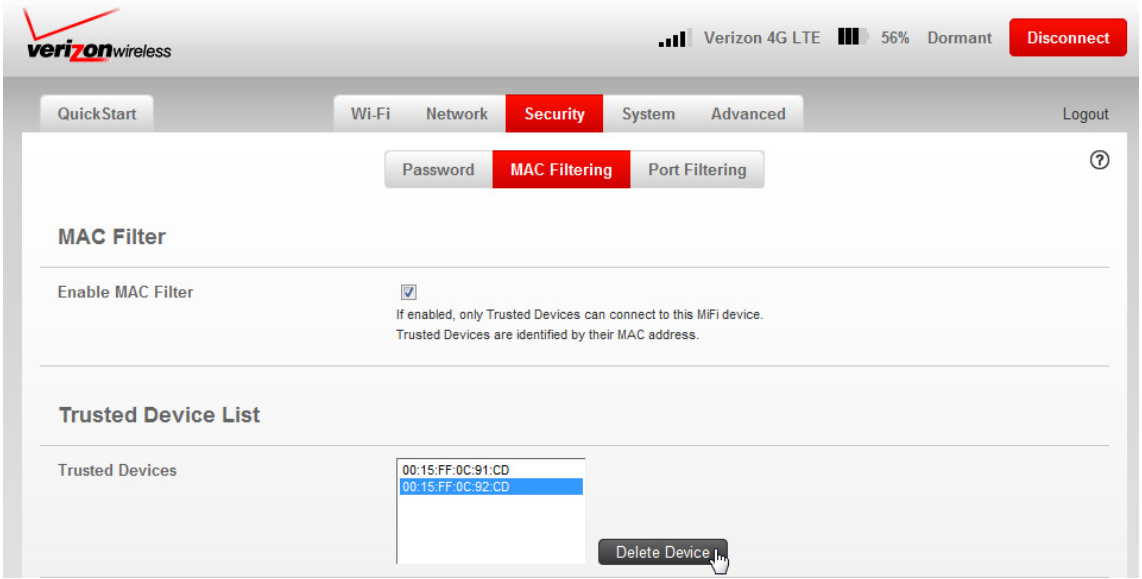
2. Click **Add Device**.
3. Repeat steps 1 and 2 as needed.
4. When the list is complete, click **Save**.



Remove a Device from the Trusted Device List

To remove a device from the Trusted Device List, follow these steps:

1. Click on the device in the Trusted Device List to select it.
2. Click **Delete Device**.



Connected Devices

- **Hostname** — The network name for the connected device (if available).
- **Date/Time** — The date/time the device was detected by the network.
- **MAC Address** — The MAC address for the connected device.

  NOTE The MAC address on the Windows operating system is called the **Physical Address**.
- **IP Address** — The IP address for the connected device.
- **IP Type** — This can be **DHCP** if the IP address came from MiFi 4620L, or **ARP** if the ARP protocol was used.

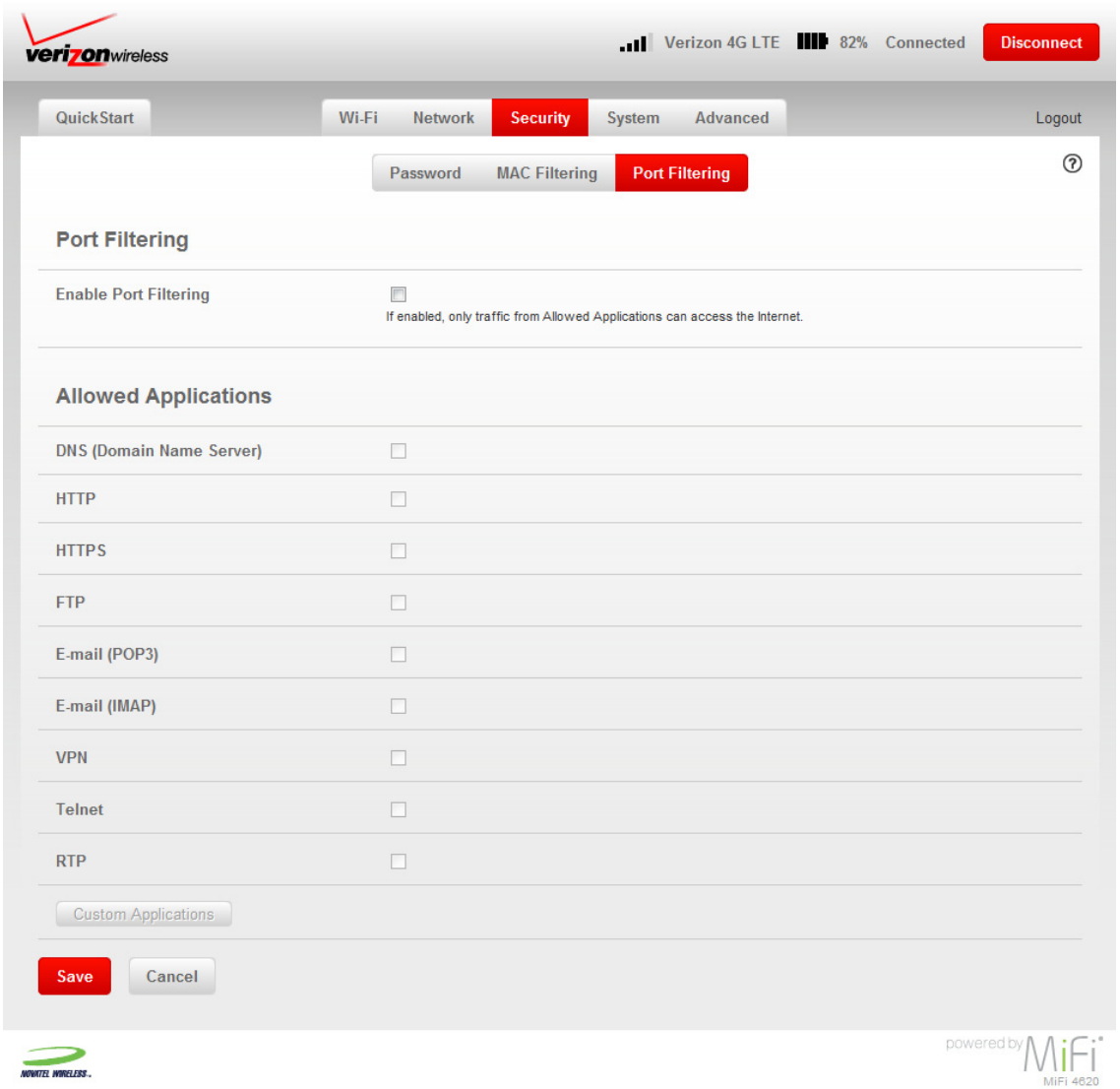
Buttons

- **Save** — Click this button to save any changes made to MAC Filtering.
- **Cancel** — Click this button to cancel any changes made to MAC Filtering.

Port Filtering

The Port Filtering screen allows you to block outgoing Internet connections. You can set a list of Allowed Applications to only allow certain programs to connect to the Internet. The Port Filtering screen has the following sections:

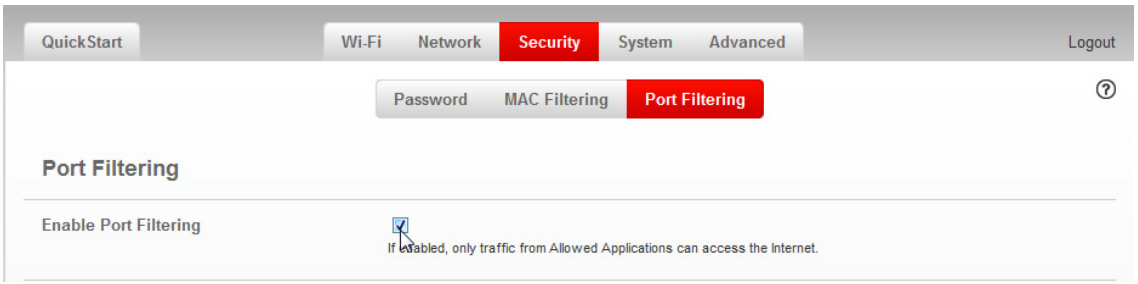
- **Port Filtering** (See Port Filtering on page 50.)
- **Allowed Applications** (See Allowed Applications on page 50.)
- **Custom Applications** (See Custom Applications on page 51.)



Port Filtering

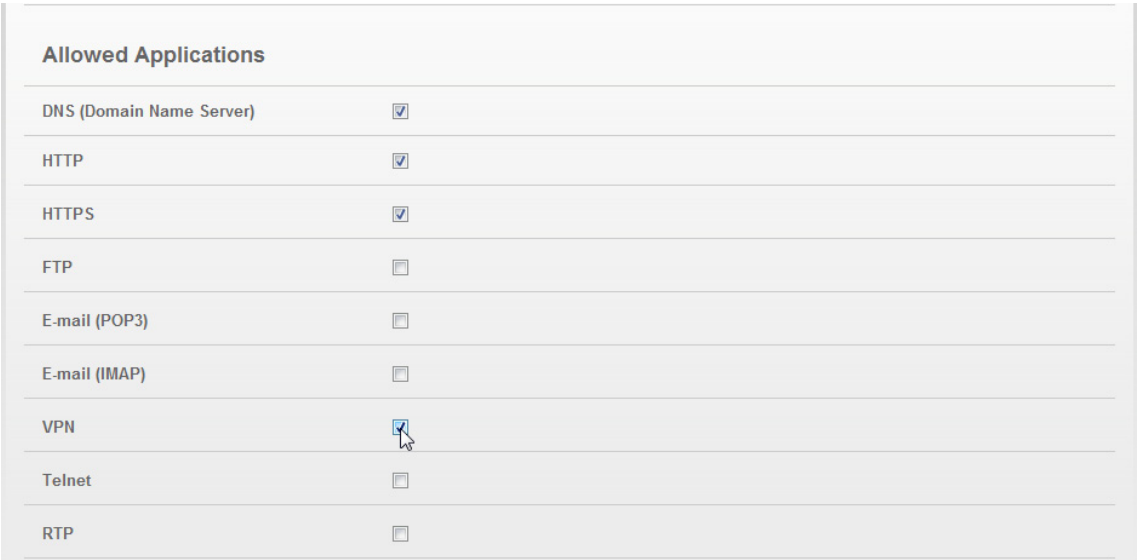
The **Enable Port Filtering** checkbox enables or disables the Port Filtering feature.

- When the feature is **enabled** (checked), you must select a port filtering application in the Allowed Applications list to allow that application to connect to the Internet. For example, if you select VPN in the Allowed Applications list but do not select HTTP, you can connect to a VPN server but you cannot connect to a web page using your Internet browser.
- When the feature is **disabled** (un-checked), any application can connect to the Internet.



Allowed Applications

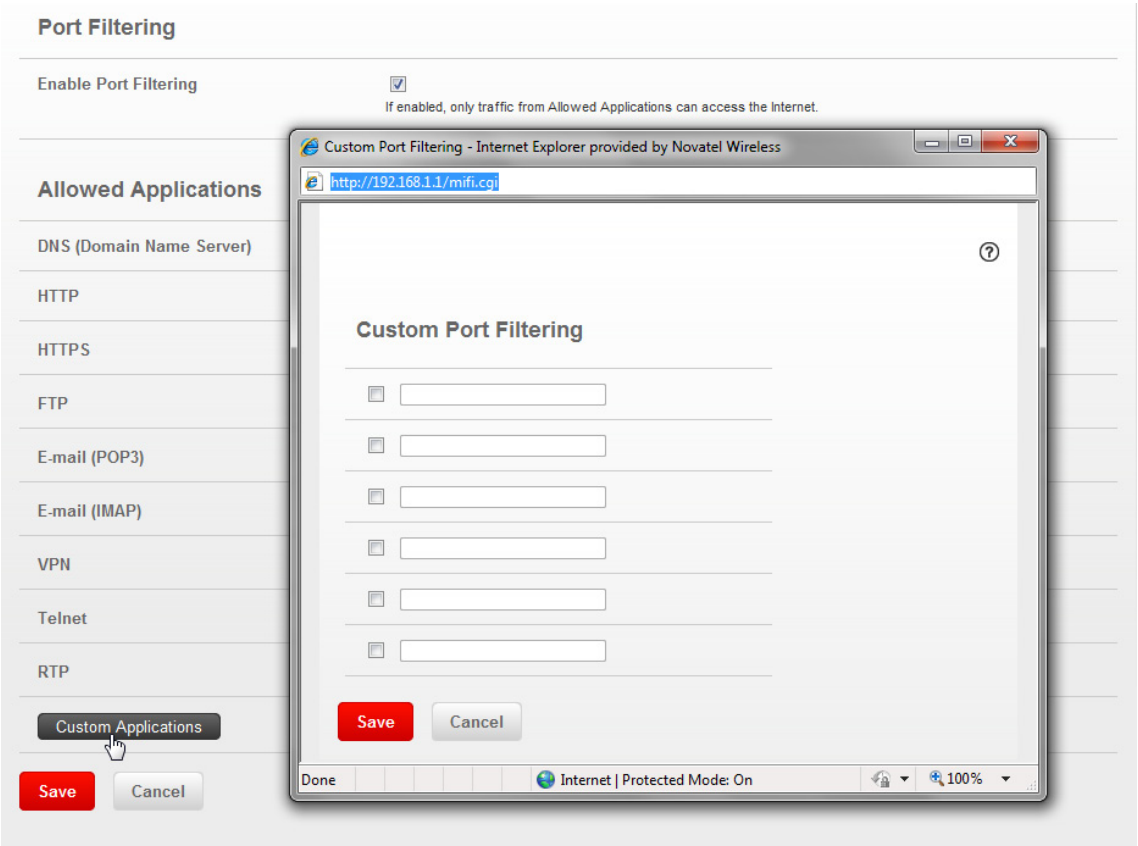
Enable each port filtering application that needs to be able to access the Internet. When port filtering is enabled, all other applications are blocked.



Custom Applications

This page is only available when the Port Filtering feature is enabled.

Click **Custom Applications** to open the Custom Port Filtering screen. You can define and enable custom Port Filtering applications. You need to know details of the traffic used and generated by the applications you wish to define.

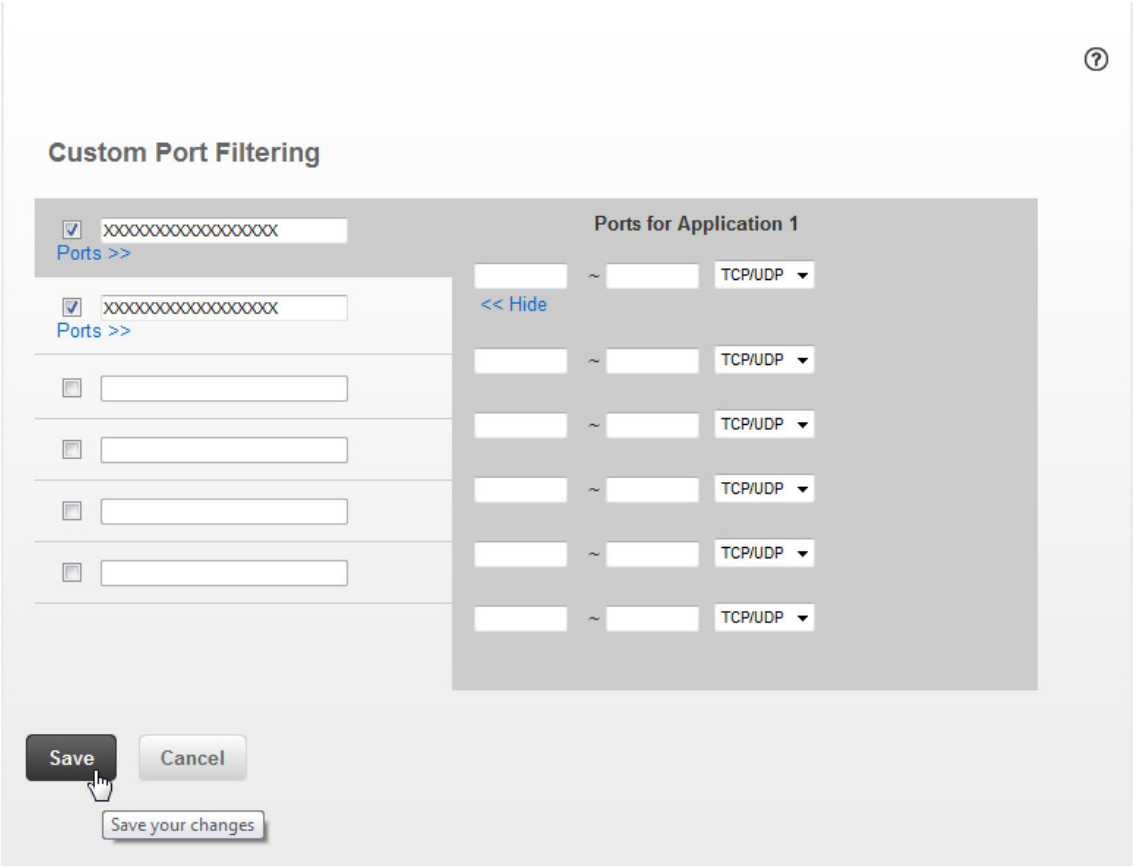


The Custom Port Filtering screen uses check boxes to enable port filtering for custom applications. Similar to the Allowed Applications list, you must enable custom applications so they can connect to the Internet.

Port Ranges

You can define up to six port ranges for each application. Each port range has the following options:

- **Start Port** — Type the beginning of the range of port numbers used by outgoing traffic for this application. Use as many rows as necessary to define the required number of port ranges. Unused rows can be left blank.
- **End Port** — Type the end of the range of port numbers. If the port is a single port instead of a range, type the same value for both the Start Port and the End Port.
- **Protocol** — For each port range (each row), select the protocol (TCP, UDP, or both) used by that port range.



You can define all of your applications before you click **Save** to save your changes.

Use the **Ports** and **Hide** links as necessary to open and close the Port Definition Panel so you can define the ports for each application as needed.

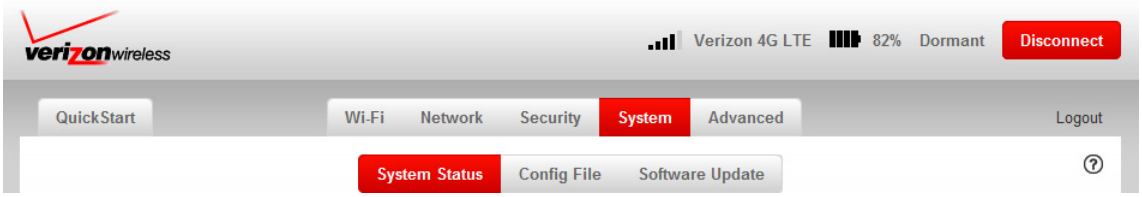
Buttons

- **Save** — Click this button to save changes made to the applications and/or port ranges.
- **Cancel** — Click this button to discard changes made to the applications and/or port ranges.

System

The System menu provides system information, a system log, and the options to delete notifications and reset to factory defaults. The System menu has the following options:

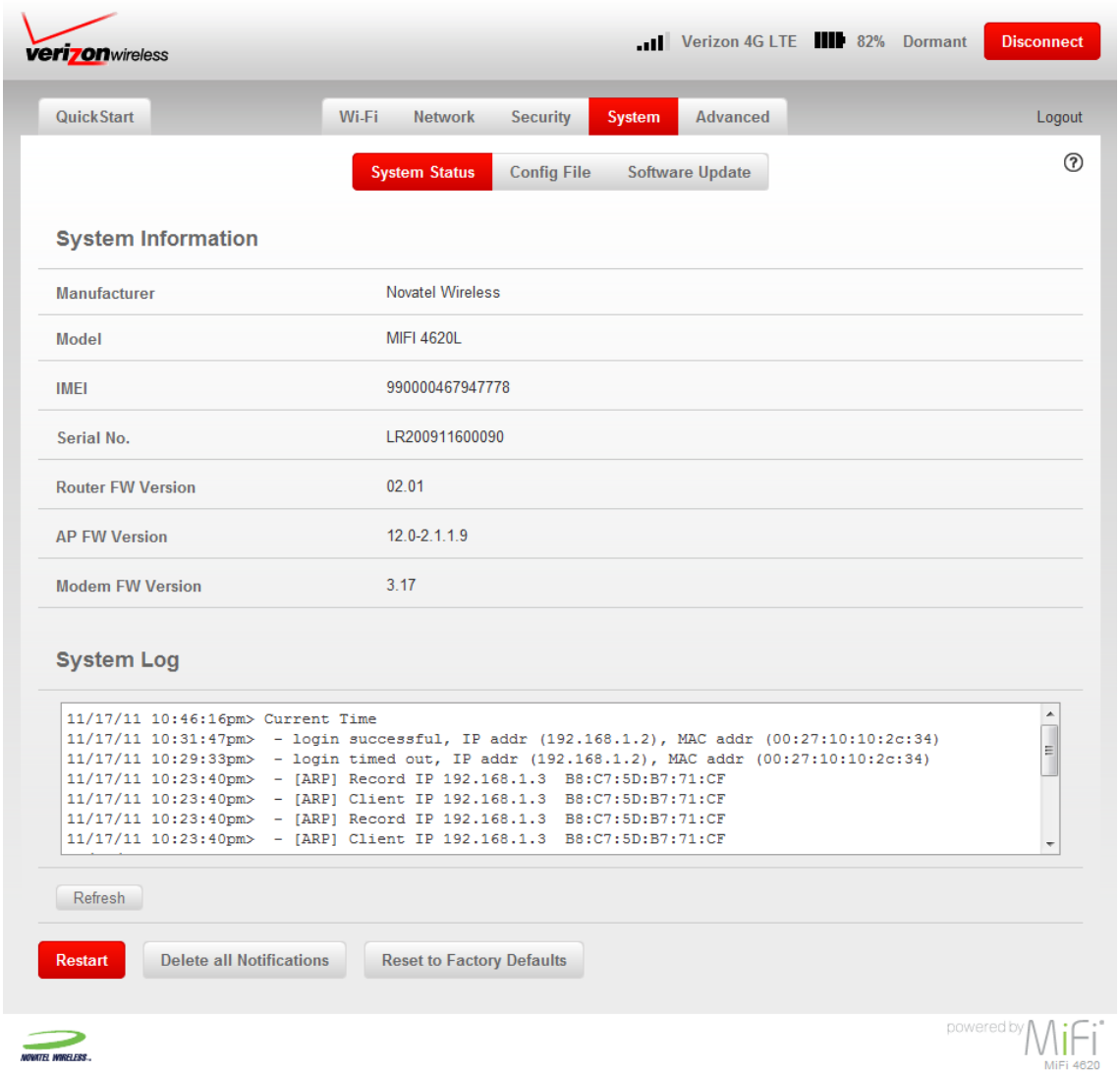
- **System Status** (See System Status on page 54.)
- **Config File** (See Config File on page 56.)
- **Software Update** (See Software Update on page 57.)



System Status

The System Status screen displays detailed information on the status of the system and a system log of various operations. The System Status screen has the following sections:

- **System Information** (See System Information on page 55.)
- **System Log** (See System Log on page 55.)



System Information

The System Information section contains detailed information about the MiFi 4620L. The System Information section has the following:

- **Manufacturer** — The manufacturer of the MiFi 4620L.
- **Model** — The model number or name of the MiFi 4620L.
- **IMEI** — The International Mobile Equipment Identity (IMEI) number for the MiFi 4620L.
- **Serial No.** — Each MiFi 4620L has a unique serial number.
- **Router FW Version** — The router firmware version.
- **AP FW Version** — For the Access Point component, the version of the firmware currently installed.
- **Modem FW Version** — The modem firmware version.

System Log

The System Log records various operations, and is mostly used for troubleshooting. Click the **Refresh** button to refresh the system log.

Buttons

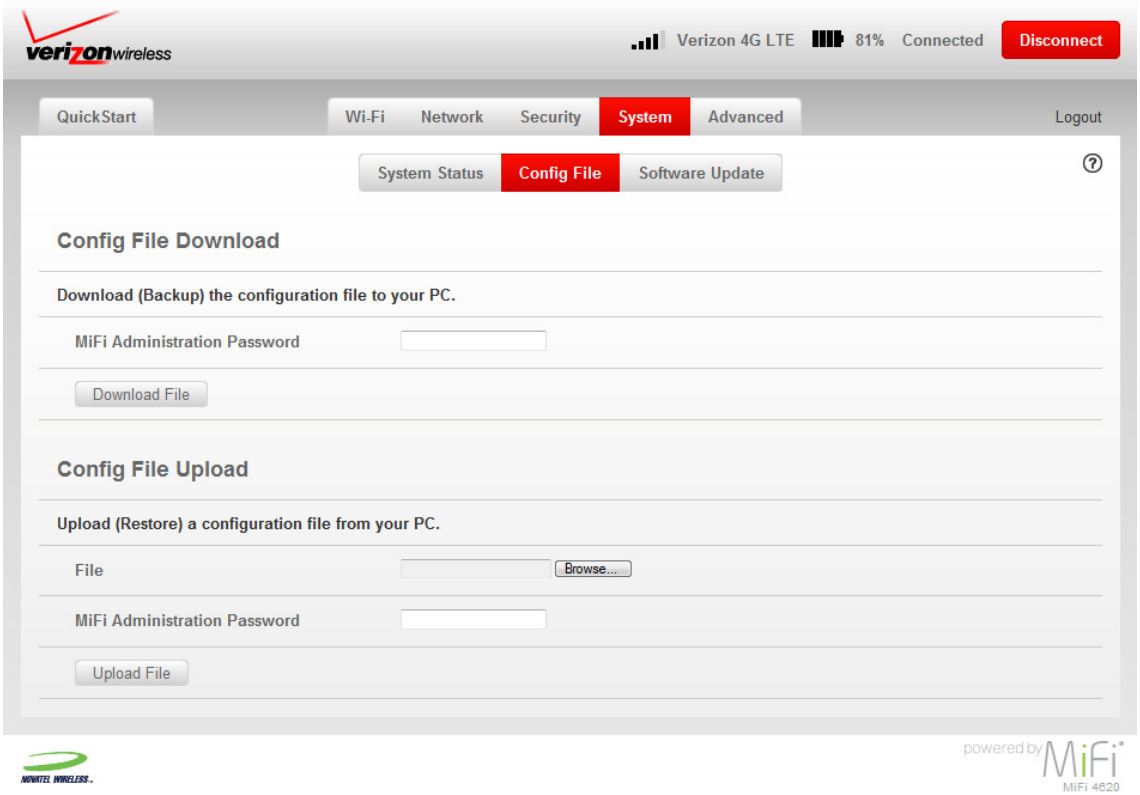
- **Restart** — Click this button to restart the MiFi 4620L. All Internet connections, and all Wi-Fi connections, are lost during the restart.
- **Delete all Notifications** — Click this button to delete all existing SMS messages.
- **Reset to Factory Defaults** — Click this button to reset all Access Point and Router settings to their factory default values. All existing settings are lost.

WARNING! The "Reset to Factory Defaults" operation overwrites ALL existing settings. If the Wi-Fi settings change, you will lose this connection, and need to reconnect using the new settings. (See How do I reset the MiFi 4620L back to factory settings? on page 76.)

Config File

The Config File screen has the following sections:

- **Config File Download** (See Config File Download on page 56.)
- **Config File Upload** (See Config File Upload on page 56.)



Config File Download

The Config File Download section allows you to download (backup) the configuration file to your PC. To backup the configuration file, follow these steps:

1. Enter your MiFi administration password in the **MiFi Administration Password** field.
2. Click the **Download File** button.

Config File Upload

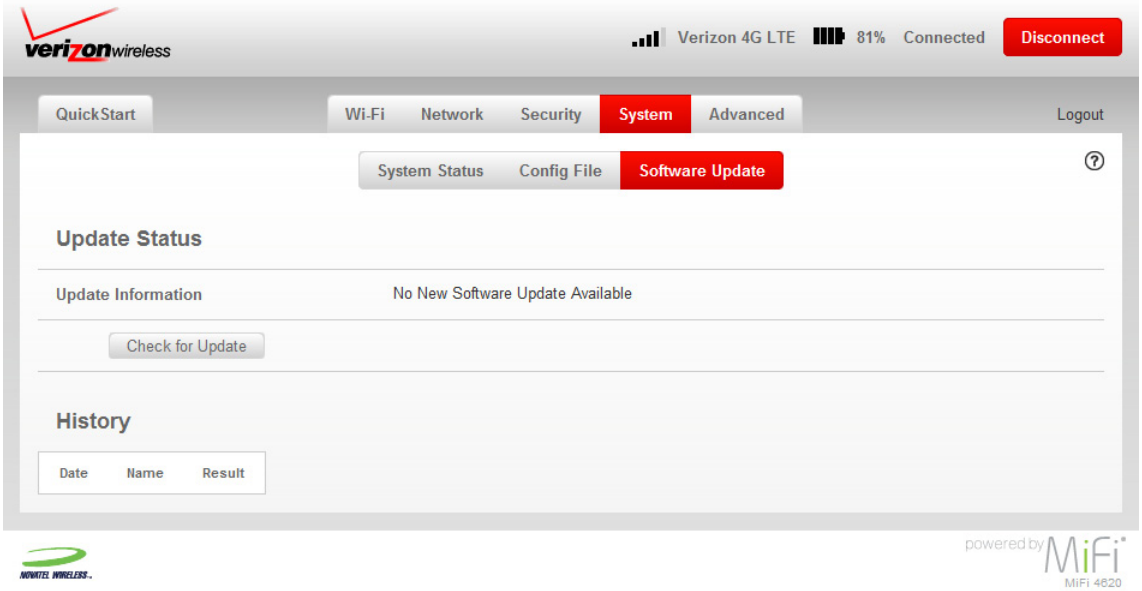
The Config File Upload section allows you to upload (restore) a configuration file from your PC. To restore a configuration file, follow these steps:

1. Click the **Browse** button and select the file you want to restore.
2. Enter your MiFi administration password in the **MiFi Administration Password** field.
3. Click the **Upload File** button.

Software Update

The Software Update screen has the following sections:

- **Update Status** (See Update Status on page 57.)
- **History** (See History on page 57.)



Update Status

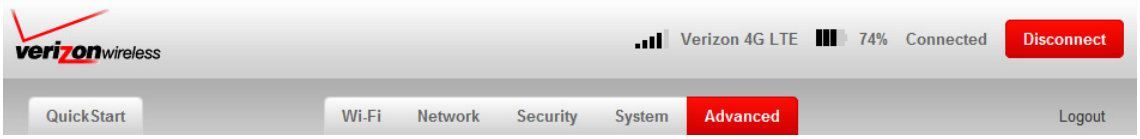
The Update Status section provides information on available software updates. Click the **Check for Update** button to check for new software updates.

History

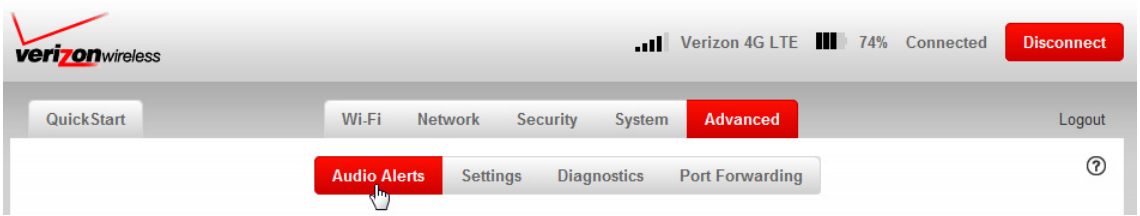
The History section provides the date, name and result for all software updates.

Advanced

The Advanced menu provides audio alert notification options; Wi-Fi, Router and System settings; modem and network operational details; and options for configuring port forwarding applications. The Advanced menu has the following options:



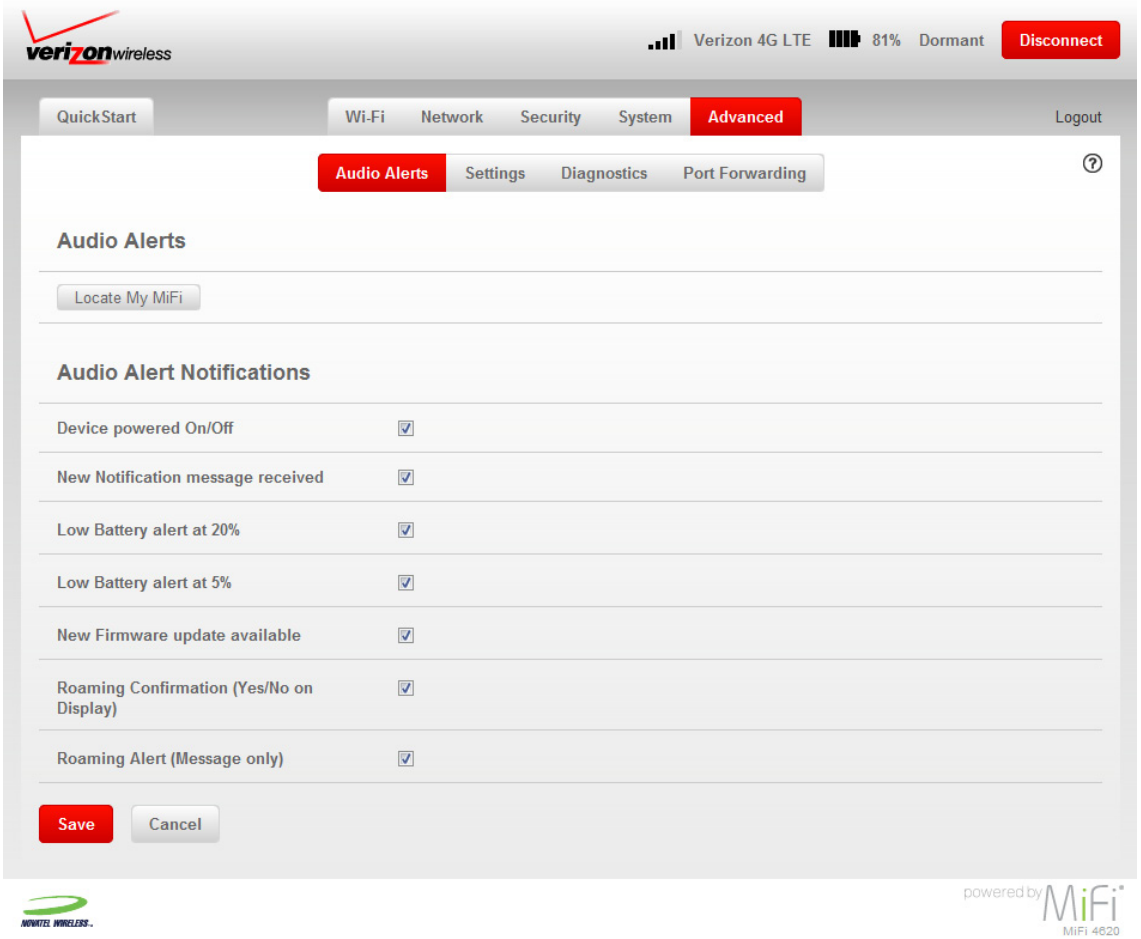
- **Audio Alerts** (See Audio Alerts on page 59.)
- **Settings** (See Settings on page 61.)
- **Diagnostics** (See Diagnostics on page 66.)
- **Port Forwarding** (See Port Forwarding on page 70.)



Audio Alerts

The Audio Alerts screen has the following sections:

- **Audio Alerts** (See Audio Alerts on page 59.)
- **Audio Alert Notifications** (See Audio Alert Notifications on page 60.)



Audio Alerts

Click the **Locate My MiFi** button to locate your device.

Audio Alert Notifications

The Audio Alert Notifications section has the following options:

- Device powered On/Off
- New Notification message received
- Low Battery alert at 20%
- Low Battery alert at 5%
- New Firmware update available
- Roaming Confirmation (Yes/No on Display). Global roaming in enabled by default. This confirmation screen will only appear if global roaming is currently disabled.
- Roaming Alert (Message only on Display)

To activate an audio alert notification, mark the corresponding check box.

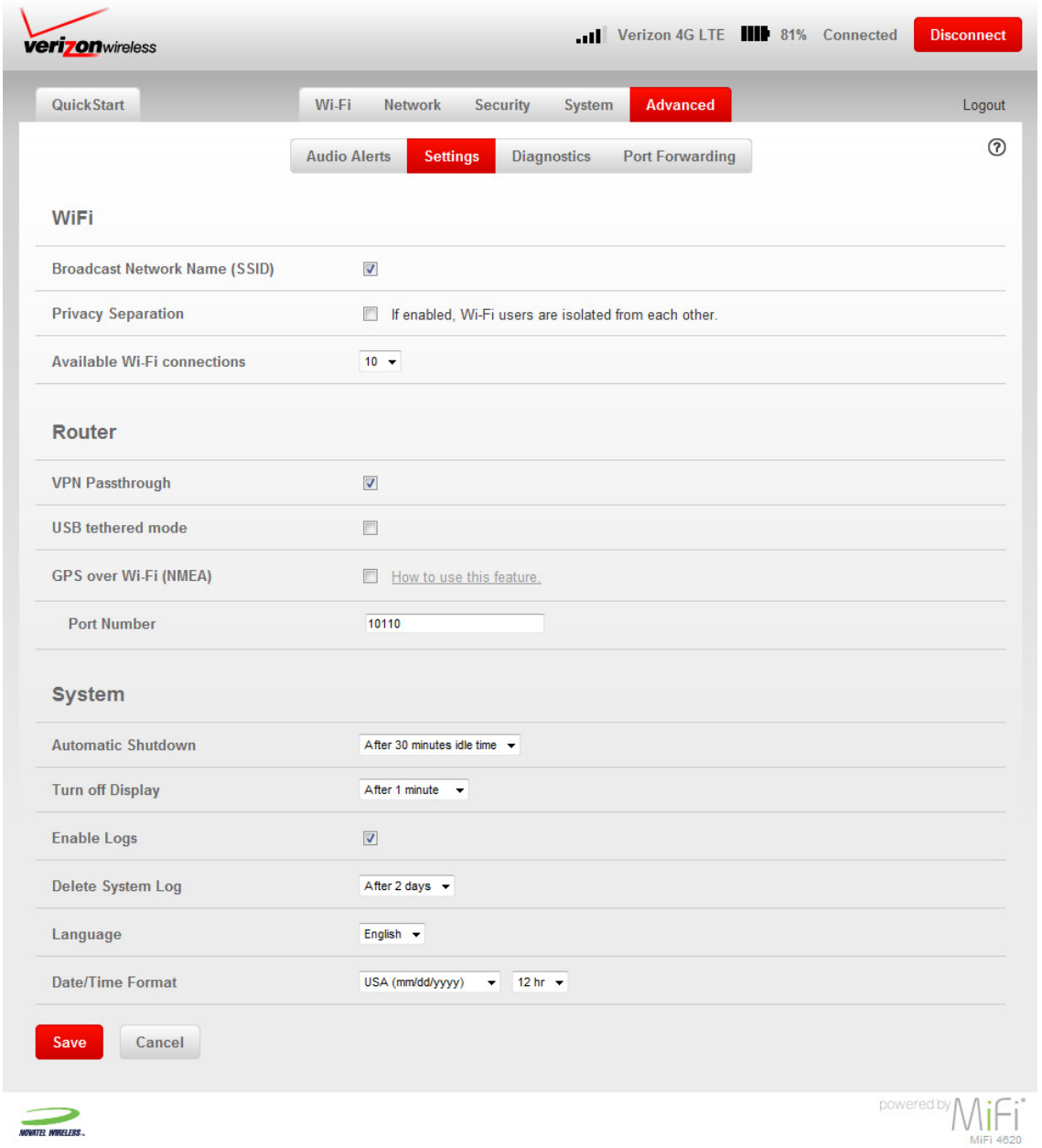
Buttons

- **Save** — Click this button to save any changes made to the audio alert notifications.
- **Cancel** — Click this button to cancel any changes made to the audio alert notifications.

Settings

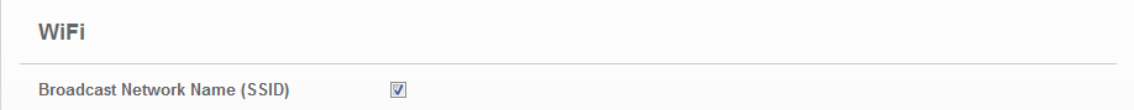
The Settings screen has the following sections:

- **Wi-Fi** (See Wi-Fi on page 62.)
- **Router** (See Router on page 62.)
- **System** (See System on page 65.)



Wi-Fi

The **Broadcast Network Name (SSID)** check box enables or disables the SSID broadcast feature.



- If this is **enabled** (checked), MiFi 4620L's wireless network appears in the **Available Wireless Networks** list on your computer or portable device.
- If this is **disabled** (un-checked), the MiFi 4620L is not listed and its network name (SSID) must be typed manually to connect a device.

The **Privacy Separation** check box enables or disables the privacy separation feature.

- If this is **enabled** (checked), Wi-Fi users are isolated from each other.
- If this is **disabled** (un-checked), Wi-Fi users are not isolated from each other.

The **Available Wi-Fi connections** menu displays the total number of Wi-Fi connections available and allows you to set how many computers or other devices can simultaneously connect to the MiFi device's Wi-Fi network.

- When your 4610L device is operating over the 4G LTE network, up to ten devices can be connected to the device's Wi-Fi network, and when operating over a 3G or GSM network, up to five devices can be connected.
- The dynamic hand-off feature ensures that all connected devices will remain connected if the device switches between 4G LTE, 3G and GSM networks due to coverage availability.

Router

The **VPN Passthrough enable** check box enables or disables the VPN Passthrough feature.

- If this is **enabled** (checked), this feature allows VPN clients to connect through MiFi 4620L to remote VPN Servers. Normally, this option should be enabled.
- If this is **disabled** (un-checked), VPN clients are not allowed to connect.

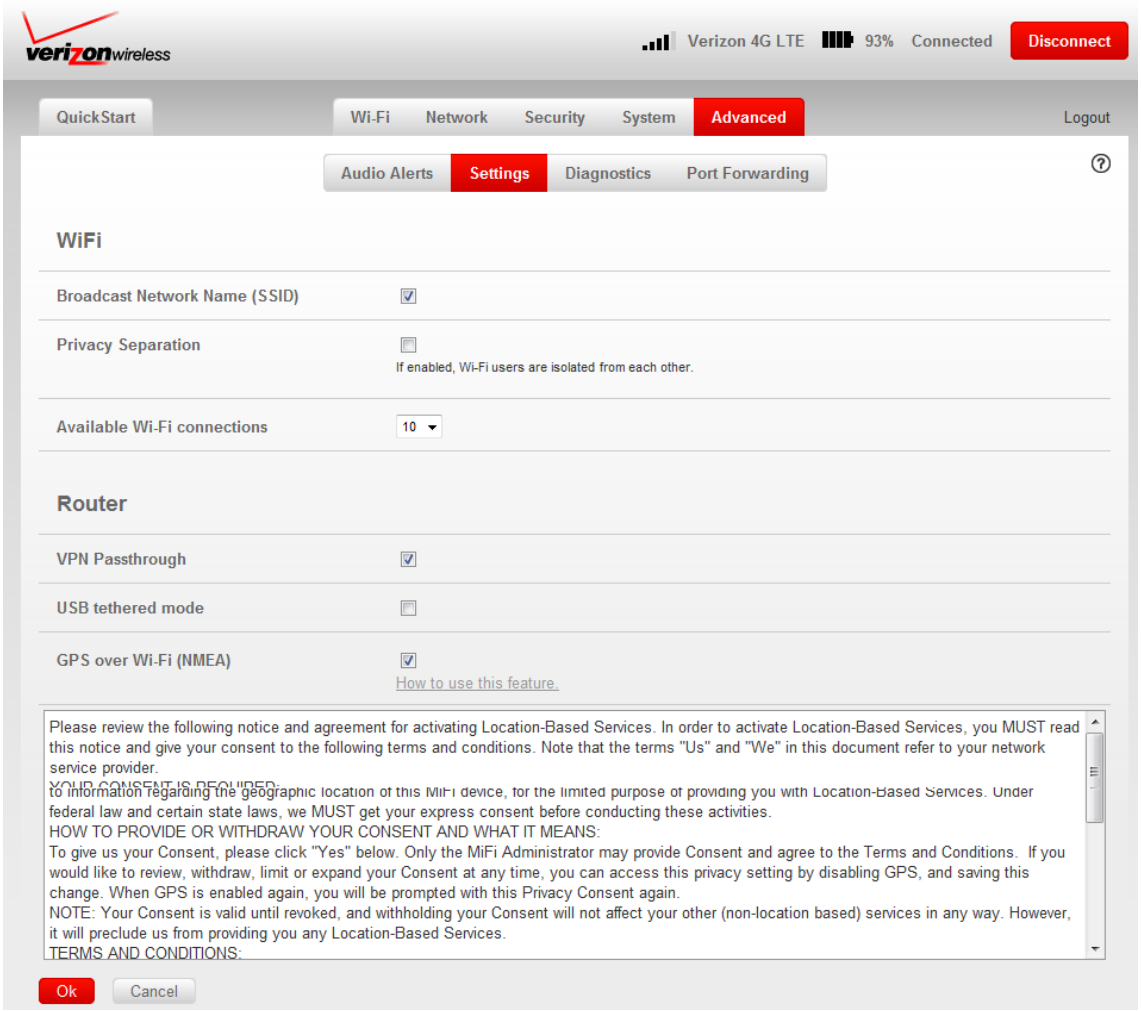
The **USB tethered mode** check box enables or disables the USB tethered mode feature.

- If this is **enabled** (checked), this feature allows connection through MiFi 4620L in tethered mode only.
- If this setting is **disabled** (un-checked), connecting a USB cable from the MiFi device to your computer will only provide power to the MiFi device. Normally, this option should be disabled.

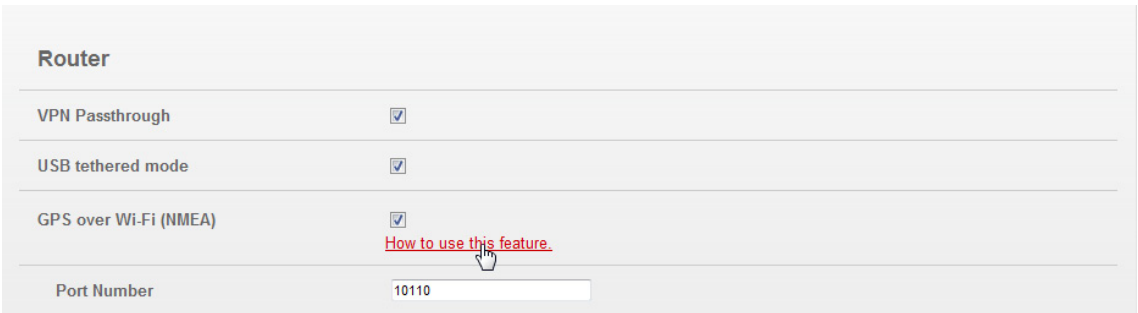
GPS Over Wi-Fi

The **GPS over Wi-Fi (NMEA)** check box enables or disables the GPS Wi-Fi feature. To set-up GPS over Wi-Fi, follow these steps:

1. Check the box **GPS over Wi-Fi (NMEA)**.
2. Click **OK** to accept the Location Based Services Agreement.
3. Click **Save** to accept the setting change.


verizon wireless
Verizon 4G LTE
93%
Connected
Disconnect
QuickStart
Wi-Fi
Network
Security
System
Advanced
Logout
Audio Alerts
Settings
Diagnostics
Port Forwarding
WiFi
Broadcast Network Name (SSID)
Privacy Separation
If enabled, Wi-Fi users are isolated from each other.
Available Wi-Fi connections
10
Router
VPN Passthrough
USB tethered mode
GPS over Wi-Fi (NMEA)
How to use this feature.
Please review the following notice and agreement for activating Location-Based Services. In order to activate Location-Based Services, you MUST read this notice and give your consent to the following terms and conditions. Note that the terms "Us" and "We" in this document refer to your network service provider.
to information regarding the geographic location of this MiFi device, for the limited purpose of providing you with Location-Based Services. Under federal law and certain state laws, we MUST get your express consent before conducting these activities.
HOW TO PROVIDE OR WITHDRAW YOUR CONSENT AND WHAT IT MEANS:
To give us your Consent, please click "Yes" below. Only the MiFi Administrator may provide Consent and agree to the Terms and Conditions. If you would like to review, withdraw, limit or expand your Consent at any time, you can access this privacy setting by disabling GPS, and saving this change. When GPS is enabled again, you will be prompted with this Privacy Consent again.
NOTE: Your Consent is valid until revoked, and withholding your Consent will not affect your other (non-location based) services in any way. However, it will preclude us from providing you any Location-Based Services.
TERMS AND CONDITIONS:
Ok
Cancel

4. Click **How to use this feature** to open the Help dialog window to select and install the required device driver.



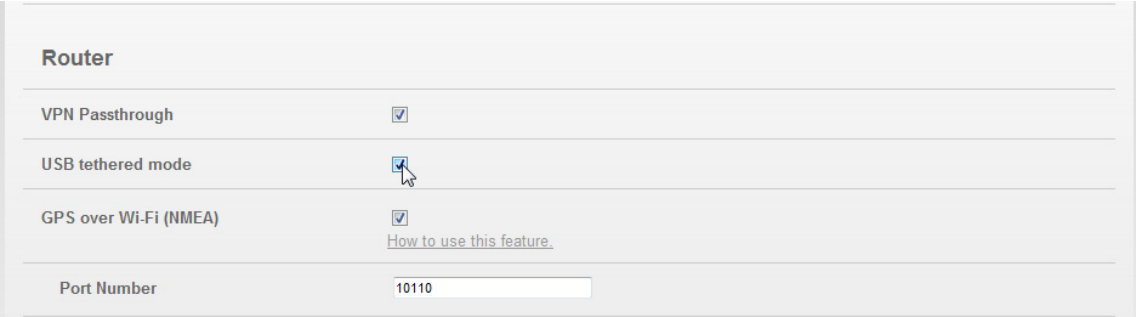
❺ After the device driver is installed, open your GPS client software program and follow the configuration instructions.

❻ Start your GPS client software application.

To set-up GPS using a USB cable, follow these steps:

❶ Check the box **GPS over Wi-Fi (NMEA)**.

❷ Check the box **USB tethered mode**.



❸ Click **OK** to accept the Location Based Services Agreement.

❹ Click **Save** to accept the setting change.

❺ Click **How to use this feature** to open the Help dialog window to select and install the required device driver.

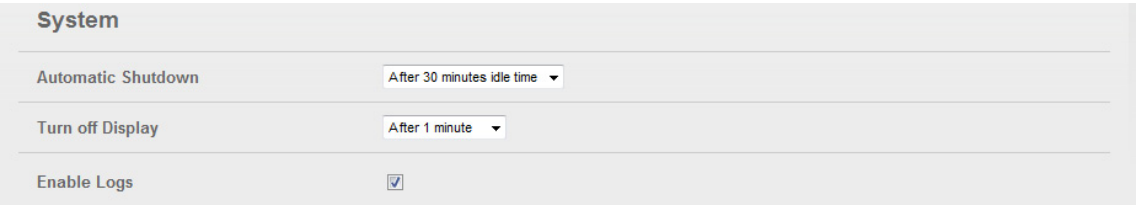
❻ Connect a USB cable to activate an internet connection without using Wi-Fi.

System

The **Automatic Shutdown** menu changes the amount of time that expires before the device automatically shuts down.

The **Turn Off Display** menu changes the amount of time that expires before the display turns off.

The **Enable Logs** check box enables or disables the System log feature.



- If this is **enabled** (checked), you can view the system log on the Diagnostics screen. (See Diagnostics on page 66.)
- If this is **disabled** (un-checked), you cannot view the system log on the Diagnostics screen.

The **Delete System Log** menu changes the amount of time that expires before the system log is deleted.

The **Language** menu changes the MiFi Settings Web UI language.

The **Date/Time Format** menu changes the format of the date to reflect that used in the US or Europe. It changes the format of the time to a 12- or 24-hour clock.

Buttons

- **Save** — Click this button to save any changes made to settings.
- **Cancel** — Click this button to cancel any changes made to settings.

Diagnostics

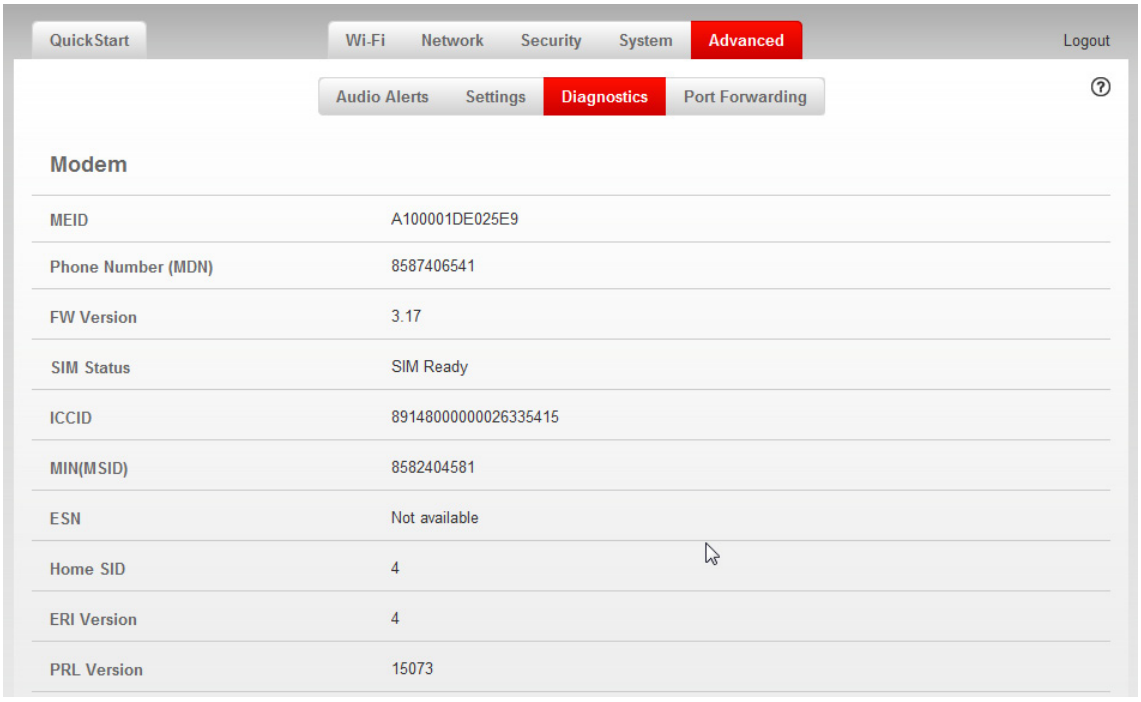
The Diagnostics screen shows information about the MiFi 4620L firmware and other system-level information. You can also view the system log. This screen is used mostly for troubleshooting and is not required for normal operation. The Diagnostics screen has the following sections:

- **Modem** (See Modem on page 67.)
- **4G Network (LTE)** (See 4G Network (LTE) on page 68.)
- **3G Network (EVDO/1xRTT)** (See 3G Network (EVDO/1xRTT) on page 68.)
- **3G Network (GSM/WCDMA)** (See on page 68.)

Modem

The Modem section has the following:

- **MEID** — The Mobile Equipment Identifier (MEID) is used by the mobile data network to identify this particular modem.
- **Phone Number (MDN)** — The Phone Number or Mobile Directory Number (MDN) is used by the mobile data network to identify this particular data service.
- **FW Version** — The modem firmware version.
- **SIM Status** — Status of the SIM card. If the SIM card is missing, or this field indicates some form of SIM error, the MiFi device will not be able to connect to the mobile network.
- **ICCID** — The ID number assigned to the SIM Card.
- **MIN (MSID)** — The Mobile Identification Number (MIN) or Mobile Station ID (MSID) is the number associated with the home service provider and the wireless phone number.
- **ESN** — The Electronic Serial Number, which is either blank or a pseudo-ESN which is not guaranteed to be unique for devices that use an MEID.
- **Home SID** — System identifier for the home network.
- **ERI Version** — The Enhanced Roaming Indicator version that is currently installed.
- **PRL Version** — The version of the Preferred Roaming List (PRL), which tells the modem which non-home carrier towers should provide roaming coverage.



4G Network (LTE)

The 4G Network (LTE) section has the following:

- **Status** — Status of the network (Disabled, Not available, or Available).
- **Network Operator** — The vendor that currently provides wireless access.
- **RSSI** — Indicates the signal strength for LTE.
- **SINR** — A measure of signal quality; the higher the number the better the signal.

3G Network (EVDO/1xRTT)

The 3G Network (EVDO/1xRTT) section has the following:

- **Status** — Status of the network (Disabled, Not available, or Available).
- **RSSI (1x)** — Indicates the RSSI for the 1xRTT signal.
- **Technology** — The type of technology used to connect to the Internet.
- **RSSI (EVDO)** — Indicates the signal strength for the EVDO/eHRPD signal.
- **Network Operator** — The vendor that currently provides wireless access.
- **Ec/Io** — A measure of how clean the signal is, and is a type of signal-to-noise ratio.
- **SID** — System identifier for the network.

3G Network (GSM/WCDMA)

The 3G Network (GSM/WCDMA) section has the following:

- **Status** — Status of the network (Disabled, Not available, or Available).
- **Technology** — The type of technology used to connect to the Internet.
- **Network Operator** — The vendor that currently provides wireless access.
- **RSSI** — Indicates the signal strength for the GSM/WCDMA signal.
- **Cell ID** — Identifies the cell tower currently used.
- **Band Preference** — A modem setting which determines the network technology used when multiple technologies are available.

Buttons

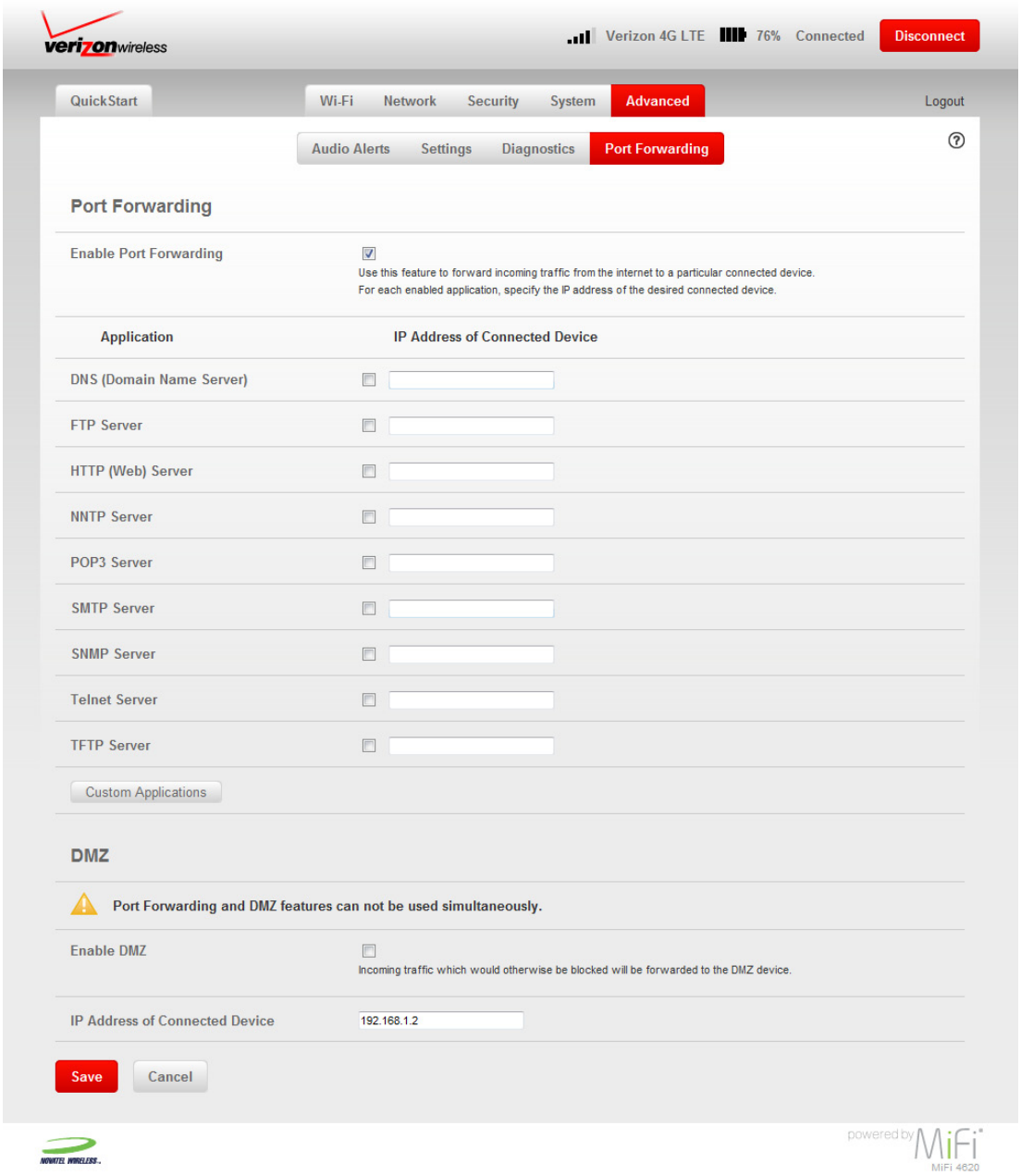
- **Field Test** — Click this button to run the Field Test. The Field Test will provide a large quantity of diagnostic information, which will be displayed in a new window.

Port Forwarding

The Port Forwarding feature allows incoming traffic (from the Internet) to be forwarded to a particular computer or device on the MiFi 4620L's wireless network. Normally, incoming traffic from the Internet is blocked.

You need to use Port Forwarding to allow Internet users to access any server you are running on your computer, such as a Web server, FTP server, or E-mail server. Also, for some online games, Port Forwarding must be used for the game to function correctly. The Port Forwarding screen has the following sections:

- **Port Forwarding** (See Port Forwarding on page 71.)
- **Custom Applications** (See Custom Applications on page 72.)
- **DMZ** (See DMZ on page 73.)



Port Forwarding

The Port Forwarding feature forwards incoming traffic from the internet to a particular connected device. To use any of the common server applications listed, follow these steps:

1. Select the **Enable Port Forwarding** check box.
2. On the Port Forwarding section of the Port Forwarding screen, type the computer's IP Address in the **IP Address of Connected Device** field beside the **Application** name.
3. Enable the corresponding **Application** on this screen by selecting its check box.
4. Save your changes by clicking **Save**.

Tell the person or company that needs port forwarding to connect to the MiFi 4620L's IP address (by default, this is http://admin.mifi or http://192.168.1.1). Connection requests are forwarded to the IP address specified in step 3.

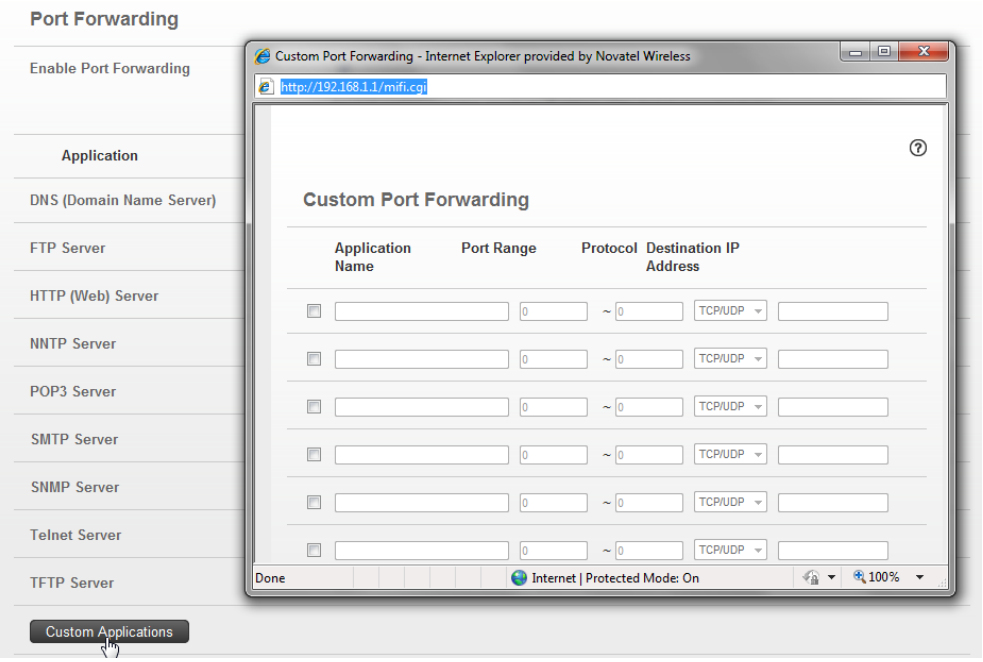
IMPORTANT When no longer needed, Port Forwarding should be disabled on this screen by de-selecting its check box, and saving change(s) by clicking **Save**. Leaving applications enabled unnecessarily creates a security risk.

Custom Applications

This page is not available unless the Port Forwarding feature is enabled.

Click **Custom Applications** to open the Custom Port Forwarding screen. You can define and enable custom Port Forwarding applications. You need to know details of the traffic used and generated by the applications you wish to define. The Port Forwarding screen has the following options:

- **Application Name** — Type a name for the application.
- **Port Range** — Click the **Ports** link to show the Port Definition Panel. Click **Hide** when you finish defining the current application. Click **Save** when you finish defining all applications.
- **Protocol** — For each port range (each row), select the protocol (TCP, UDP, or both) used by incoming traffic on that port range.
- **Destination IP Address** — Input the IP address of the connected device to which you want incoming traffic to be forwarded.



Port Ranges

You can define up to six port ranges for each application. Each port range has the following options:

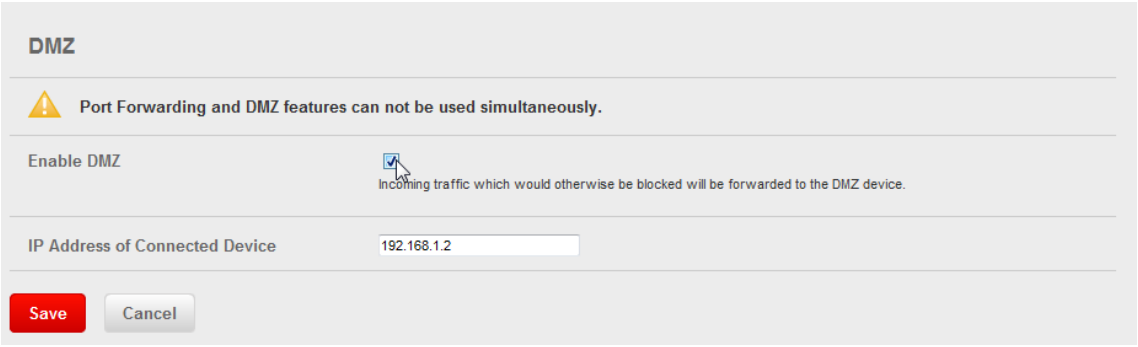
- **Start Port** — Type the beginning of the range of port numbers used by outgoing traffic for this application. Use as many rows as necessary to define the required number of port ranges. Unused rows can be left blank.
- **End Port** — Type the end of the range of port numbers. If the port is a single port instead of a range, type the same value for both the Start Port and the End Port.
- **Protocol** — For each port range (each row), select the protocol (TCP, UDP, or both) used by that port range.

You can define all of your applications before you click **Save** to save your changes. Use the **Ports** and **Hide** links as necessary to open and close the Port Definition Panel so you can define the ports for each application as needed.

DMZ

The DMZ feature forwards incoming traffic which would otherwise be blocked to the DMZ device. To use this feature, follow these steps:

1. Select the **Enable DMZ** check box.
2. On the DMZ section of the Port Forwarding screen, type the computer's IP Address in the **IP Address of Connected Device** field.
3. Save your changes by clicking **Save**.


DMZ
Port Forwarding and DMZ features can not be used simultaneously.
Enable DMZ
Incoming traffic which would otherwise be blocked will be forwarded to the DMZ device.
IP Address of Connected Device
192.168.1.2
Save
Cancel

IMPORTANT The Port Forwarding and DMZ features cannot be used simultaneously.

Buttons

- **Save** — Click this button to save changes made to port forwarding.
- **Cancel** — Click this button to return to the previous settings.

4

Troubleshooting

Overview
Common Problems and Solutions
Technical Support

Overview

When properly installed, the MiFi 4620L is a highly reliable product. Most problems are caused by one of these issues:

- System resources required by the device are being used by other devices.
- Network coverage is unavailable due to coverage area, an account problem, or a network problem.

The following tips can help solve many common problems encountered while using the device.

First Steps

- Make sure you are using the device in the correct geographic region.
- Ensure that your wireless coverage extends to your current location.
- Ensure you have an active subscription plan.
- Restarting your computer and your modem can resolve many issues.

IMPORTANT Before contacting support, be sure to restart both your computer and your device.

Common Problems and Solutions

The following are some common problems and solutions.

My MiFi 4620L just powered off without my pressing the power button. Why?

This may occur under any of the following circumstances.

- Pressing the Master Reset button
- Restarting the device
- Switching profiles
- Restoring the configuration settings
- Battery depletion

To restore battery power, follow these steps.

1. Manually press the power button to turn it back on.
2. If the battery is depleted, charge the device with the wall charger.

How do I reset the MiFi 4620L back to factory settings?

The master reset button is in a small hole located on the bottom of the device, underneath the battery cover. This button returns the device to factory settings, including re-setting the network name (SSID) and network key (Wi-Fi passkey) to those printed on the sticker affixed to the back of the device. To reset the device, follow these steps.

1. Place one end of an unfolded paper clip into the master reset button hole.
2. Press the paper clip on the button until the LED blinks green one full blink and then a very brief blink (about five seconds).

How do I reset the Access Point and Router settings back to factory settings?

To reset the access point and router settings, follow these steps.

1. Connect to MiFi Settings by connecting your computer to the MiFi wireless network and going to http://admin.mifi or http://192.168.1.1 in your browser.
2. Connect to the Diagnostics screen. (See Diagnostics on page 66.) The Diagnostics screen has a **Reset to Factory Defaults** button. This button resets all Access Point and Router settings to their factory default values. All existing settings are lost.

Technical Support

IMPORTANT Before contacting support, be sure to re-start both your computer and the device.

Technical Support

For additional information and technical support for Novatel Wireless devices, you can visit the Novatel Wireless Data Technical Support page at www.novatelwireless.com/support.

5

Product Specifications and Regulatory Information

Product Specifications
Regulatory Statements
Wireless Communications
Limited Warranty and Liability
Safety Hazards
Proper Battery Use and Disposal

Product Specifications

General

Name:	Verizon MiFi 4620L Jetpack
Model:	MiFi 4620L
Approvals:	FCC (North America)
Weight:	85 g / 3 oz
Dimensions:	95 mm x 60 mm x 14 mm, 3.76 in x 2.36 in x 0.53 in
Wireless Network – Tri Mode:	LTE, CDMA 1X/EV-DO Rev A, HSPA+DC/ WCDMA/EDGE/GPRS
Wireless Network – Wi-Fi Mode	802.11 b/g/n
Default SSID	MiFi4620L Jetpack XXXX Secure (see the sticker on the back of your device for your ID)
Battery	
• Size • Time required for full charge	1500 mAh 2.5-3 hours (when not in use)
Chip Set:	QUALCOMM® MDM9600
Interface Type:	Type B USB Port for Micro USB, used by the wall charger

Technology/Bands

Technology:	LTE, CDMA Rev A, Rev 0, 1XRTT
Band Designation:	LTE 700 MHz CDMA 1x/EV-DO RA; 800/1900 MHz HSPA+/WCDMA; 850/900/1900/2100 MHz EDGE/GPRS; 850/900/1800/1900 MHz
CDMA Transmit Band:	824.7-848.31 MHz/1851.25-1908.75 MHz
CDMA Receive Band:	869.7-893.31 MHz/1931.25-1988.75 MHz

Environmental

Operating Temperature:	-10 ° C to +45° C (14°F to 113° F)
Storage Temperature:	-20° C to 60° C (-4° F to 140° F)
Drop:	1 meter (3.28 feet) drop, no damage – fully operational
Vibration Stability:	5 Hz to 500 Hz, 0.1 octave/second

Regulatory Statements

Federal Communications Commission Notice (FCC – United States)

Electronic devices, including computers and wireless modems, generate RF energy incidental to their intended function and are therefore subject to FCC rules and regulations.

This equipment has been tested to, and found to be within the acceptable limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment.

This equipment generates radio frequency energy and is designed for use in accordance with the manufacturer's user manual. However, there is no guarantee that interference will not occur in any particular installation. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off and on, ou are encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

This device complies with Part 15 of the Federal Communications Commission (FCC) Rules. Operation is subject to the following two conditions.

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

WARNING: DO NOT ATTEMPT TO SERVICE THE WIRELESS COMMUNICATION DEVICE YOURSELF. SUCH ACTION MAY VOID THE WARRANTY. THE MiFi 4620L MODEM IS FACTORY TUNED. NO CUSTOMER CALIBRATION OR TUNING IS REQUIRED. CONTACT NOVATEL WIRELESS TECHNICAL SUPPORT FOR INFORMATION ABOUT SERVICING YOUR WIRELESS COMMUNICATION DEVICE.

FCC CAUTION: Any changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

MODIFICATIONS: The FCC requires that you be notified that any changes or modifications made to this device that are not expressly approved by Novatel Wireless, Inc. may void your authority to operate the equipment.

NOTE: The Radio Frequency (RF) emitter installed in your modem must not be located or operated in conjunction with any other antenna or transmitter, unless specifically authorized by Novatel Wireless Technologies.

RF Exposure Content

FCC Equipment Authorization ID: **PKRNVWMIFI4620**

This device is authorized for use in mobile and portable applications.

This product has been evaluated for SAR and meets the FCC Guidelines for exposure to radio waves.

For better signal reception, coverage range and data throughput, do not place the router near any physical obstruction, including in a pocket or in close proximity of any object. For RF Safety, a mandatory minimum of 10 mm (1 cm) should be maintained between the device and any part of a human body when using the device. Increasing the separation between the device and the body will result in better reception and reduced exposure to radio energy.

Wireless Communications

IMPORTANT Due to the transmission and reception properties of wireless communications, data occasionally can be lost or delayed.

This can be due to the variation in radio signal strength that results from changes in the characteristics of the radio transmission path. Although data loss is rare, the environment where you operate the modem might adversely affect communications.

Variations in radio signal strength are referred to as fading. Fading is caused by several different factors including signal reflection, the ionosphere, and interference from other radio channels.

Novatel Wireless or its partners will not be held responsible for damages of any kind resulting from the delays or errors in data transmitted or received with the MiFi 4620L device, or failure of the MiFi 4620L device to transmit or receive such data.

Limited Warranty and Liability

Novatel Wireless, Inc. warrants for the 12-month period immediately following receipt of the Product by Purchaser that the Product will be free from defects in material and workmanship under normal use. THESE WARRANTIES ARE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The exclusive remedy for a claim under this warranty shall be limited to the repair or replacement, at Novatel Wireless' option, of defective or non-conforming materials, parts or components. The foregoing warranties do not extend to (I) non conformities, defects or errors in the Products due to accident, abuse, misuse or negligent use of the Products or use in other than a normal and customary manner, environmental conditions not conforming to Novatel Wireless' specification, of failure to follow prescribed installation, operating and maintenance procedures, (II) defects, errors or nonconformity's in the Product due to modifications, alterations, additions or changes not made in accordance with Novatel Wireless' specifications or authorized by Novatel Wireless, (III) normal wear and tear, (IV) damage caused by force of nature or act of any third person, (V) shipping damage, (VI) service or repair of Product by the purchaser without prior written consent from Novatel Wireless, (VII) products designated by Novatel Wireless as beta site test samples, experimental, developmental, reproduction, sample, incomplete or out of specification Products, or (VIII) returned products if the original identification marks have been removed or altered.

Safety Hazards

Do not operate the MiFi 4620L device in an environment that might be susceptible to radio interference resulting in danger, specifically:

Areas where prohibited by the law

Follow any special rules and regulations and obey all signs and notices. Always turn off the host device when instructed to do so, or when you suspect that it might cause interference or danger.

Where explosive atmospheres might be present

Do not operate your device in any area where a potentially explosive atmosphere might exist. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Be aware and comply with all signs and instructions.

Users are advised not to operate the device while at a refueling point or service station. Users are reminded to observe restrictions on the use of radio equipment in fuel depots (fuel storage and distribution areas), chemical plants or where blasting operations are in progress.

Areas with a potentially explosive atmosphere are often but not always clearly marked. Potential locations can include gas stations, below deck on boats, chemical transfer or storage facilities, vehicles using liquefied petroleum gas (such as propane or butane), areas where the air contains chemicals or particles, such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine.

Near medical and life support equipment

Do not operate your device in any area where medical equipment, life support equipment, or near any equipment that might be susceptible to any form of radio interference. In such areas, the host communications device must be turned off. The device can transmit signals that could interfere with this equipment.

On an aircraft, either on the ground or airborne

In addition to FAA requirements, many airline regulations state that you must suspend wireless operations before boarding an airplane. Please ensure that the modem is turned off prior to boarding aircraft in order to comply with these regulations. The modem can transmit signals that could interfere with various onboard systems and controls.

While operating a vehicle

The driver or operator of any vehicle should not operate a wireless data device while in control of a vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some countries, operating such communications devices while in control of a vehicle is an offense.

Electrostatic discharge (ESD)

Electrical and electronic devices are sensitive to electrostatic discharge (ESD). Macintosh native connection software might attempt to reinitialize the device should a substantial electrostatic discharge reset the device. If the software is not operational after an ESD occurrence, then restart your computer.

Proper Battery Use and Disposal

IMPORTANT In event of a battery leak:

- Do not allow the liquid to come in contact with the skin or the eyes. If contact has been made, wash the affected area with large amounts of water and seek medical advice.
- Seek medical advice immediately if a battery has been swallowed.
- Communicate the appropriate steps to be taken if a hazard occurs. Due to the transmission and reception properties of wireless communications, data occasionally can be lost or delayed.

Please review the following guidelines for safe and responsible battery use.

- Do not disassemble or open, crush, bend or deform, puncture, or shred.
- Do not modify or remanufacture, attempt to insert a foreign object into the battery, immerse or expose to water or other liquids, or expose to fire, explosion, or other hazard.
- Only use the battery for the system for which it was specified.
- Only use the battery with a charging system that has been qualified with the system per this standard. Use of an unqualified battery or charger may present a risk of fire, explosion, leakage, or other hazard.
- Do not short circuit a battery or allow a metallic or conductive object to contact the battery terminals.
- Replace the battery only with another battery that has been qualified with the system per this standard. Use of an unqualified battery may present a risk of fire, explosion, leakage, or other hazard.
- Promptly dispose of used batteries in accordance with local regulations.
- Battery usage by children should be supervised.
- Avoid dropping the device or battery. If the device or the battery is dropped, especially on a hard surface, and the user suspects damage, take it to a service center for inspection.
- Improper battery use may result in a fire, explosion, or other hazard.

6

Glossary

Glossary

- **3G** — Third Generation. 3G refers to the third generation of mobile telephony technology.
- **4G LTE** — Fourth Generation. 4G LTE refers to the fourth generation of mobile telephony technology.
- **802.11 (b, g, n)** — A set of WLAN communication standards in the 2.4, 3.6 and 5 GHz frequency bands.
- **bps** — Bits per second. The rate of data flow.
- **Broadband** — High-capacity high-speed transmission channel with a wider bandwidth than conventional modem lines. Broadband channels can carry video, voice, and data simultaneously.
- **CDMA** — Code Division Multiple Access. It is the underlying channel access method used by some mobile phone standards.
- **DHCP** — Dynamic Host Configuration Protocol. Software found in servers and routers that automatically assigns temporary IP addresses to clients logging into an IP network.
- **DHCP Server** — A server or service with a server that assigns IP addresses.
- **DNS** — Domain Name System. A system for converting host names and domain names into IP addresses on the Internet or on local networks that use the TCP/IP protocol.
- **EDGE** — Enhances Data rates for GSM Evolution. A digital mobile phone technology that allows improved data transmission rates as a backward-compatible extension of GSM.
- **Firmware** — A computer program embedded in an electronic device. Firmware usually contains operating code for the device.
- **GPRS** — General Packet Radio Service. A packet oriented mobile data service on the 2G and 3G cellular communication system's global system for mobile communications (GSM).
- **GSM** — A computer program embedded in an electronic device. Firmware usually contains operating code for the device.
- **Hotspot** — A Wi-Fi (802.11) access point or the area covered by an access point. Used for connecting to the Internet.
- **HSPA+** — Evolved High-Speed Packet Access. A technical standard for wireless, broadband telecommunication. Provides data rates up to 84 Mbit/s to the mobile device and 22 Mbit/s from the mobile device.
- **HTTP** — Hypertext Transfer Protocol. An application-level protocol for accessing the World Wide Web over the Internet.
- **IEEE —** Institute of Electrical and Electronics Engineers. An international technical/professional society that promotes standardization in technical disciplines.
- **IMEI** — International Mobile Equipment Identity. Used in LTE networks to identify the device. It is usually printed on the device and can often be retrieved using a USSD code.
- **IP** — Internet Protocol. The mechanism by which packets are routed between computers on a network.

- **IP Type** — The type of service provided over a network.
- **IP address** — Internet Protocol address. The address of a device attached to an IP network (TCP/IP network).
- **ISP** — Internet Service Provider. Also referred to as the service carrier, an ISP provides Internet connection service. (***See*** Network Operator)
- **Kbps** — Kilobits per second. The rate of data flow.
- **LAN** — Local Area Network. A type of network that lets a group of computers, all in close proximity (such as inside an office building), communicate with one another. It does not use common carrier circuits though it can have gateways or bridges to other public or private networks.
- **MAC Address** — Media Access Control. A number that uniquely identifies each network hardware device. MAC addresses are 12-digit hexadecimal numbers. This is also known as the physical or hardware address.
- **Mbps** — Megabits per second.
- **MSID** — Mobile Station IDentifier. A number for a mobile phone that identifies that phone to the network. These numbers are carrier specific.
- **Network Operator** — The vendor who provides your wireless access. Known by different names in different regions, some examples are: wireless provider, network provider, and service provider.
- **Network Technology** — The technology on which a particular network provider's system is built; such as CDMA or EVDO.
- **Port** — A virtual data connection used by programs to exchange data. It is the endpoint in a logical connection. The port is specified by the port number.
- **Port Forwarding** — A process that allows remote devices to connect to a specific computer within a private LAN.
- **Port Number** — A 16-bit number used by the TCP and UDP protocols to direct traffic on a TCP/IP host. Certain port numbers are standard for common applications.
- **PRL** — Preferred Roaming List. A list that your wireless phone or device uses to determine which networks to connect with when you are roaming. (Network operator specific).
- **Protocol** — A standard that enables connection, communication, and data transfer between computing endpoints.
- **Proxy** — A firewall mechanism that replaces the IP address of a host on the internal (protected) network with its own IP address for all traffic passing through it.
- **Rev A** — CDMA EV-DO Rev. A is a leading-edge wireless technology with higher data rates and higher system capacity. It is a fully backward compatible standard and remains interoperable with deployed EV-DO networks and devices around the world. The increased data rates on Rev. A's physical layer enable richer applications and services. For more information, visit www.cdg.org.
- **Router** — A device that directs traffic from one network to another.
- **SIM** — Subscriber Identification Module. Found in GSM network technology, the SIM is a card containing identification information for the subscriber and their account. The SIM card can be moved to different devices.

- **SSID** — Service Set IDentifier. The name assigned to a Wi-Fi network.
- **TCP/IP** — Transmission Control Protocol/Internet Protocol. The set of communications protocols used for the Internet and other similar networks.
- **USB** — Universal Serial Bus. A connection type for computing device peripherals such as a printer, mobile modem, etc. USB connectors may be used for data transfer or charging.
- **USB Port Types** — The USB ports on computers and hubs have a rectangular Type A socket, and peripheral devices have a cable with a Type A plug. Peripherals that do not have an attached cable have a square Type B socket on the device and a separate cable with a Type A and Type B plug. Ports and connectors are available in different sizes (for example, standard, mini, and micro).
- **VPN** — Virtual Private Network. A secure private network that runs over the public Internet. Commonly used to connect to an office network from elsewhere.
- **WCDMA** — Wideband Code Division Multiple Access. Anair interface standard found in 3G mobile telecommunications networks. The most-commonly used member of the UMTS family.
- **WWAN** — Wireless Wide Area Network. A public network that extends beyond architectural, geographical, or political boundaries (unlike a LAN, which is usually a private network located within a room, building, or other limited area).
- **WEP** — Wired Equivalent Privacy. An IEEE standard security protocol for 802.11 networks. Superseded by WPA and WPA2.
- **Wi-Fi** — Wireless Fidelity. Any system that uses the 802.11 standard developed and released in 1997 by the IEEE.
- **Wi-Fi Client** — A wireless device that connects to the Internet via Wi-Fi.
- **WPA/WPA2** — Wi-Fi Protected Access. A security protocol for wireless 802.11 networks from the Wi-Fi Alliance.